DOCUMENT RESUME

ED 261 252 CE 042 485

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TITLE Personnel Training--Secondary Vocational Agriculture Teacher Education.
INSTITUTION Texas A and M Univ., College Station. Dept. of Agricultural Education.
SPONS AGENCY Texas Education Agency, Austin. Dept. of Occupational Education and Technology.
PUB DATE 1 Jul 85
NOTE 103p.; Light print throughout document.
PUB TYPE Reports - Research/Technical (143) -- Viewpoints (120)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Agricultural Education; *Beginning Teachers; Computer Assisted Instruction; Computer Literacy; Computer Managed Instruction; *Computer Oriented Programs; Computer Simulation; *Computer Software; Educational Needs; *Material Development; Programing; Secondary Education; State Programs; State Surveys; Teacher Administrator Relationship; Teacher Improvement; Teacher Morale; Teaching Methods; *Vocational Education
IDENTIFIERS Texas

ABSTRACT

This document consists of three parts. The first part is a report on a project conducted to develop computer software needed by vocational agriculture teachers in Texas. The report details the process used to assess and develop software, and provides guidelines that can be used by others in evaluating computer software for vocational agriculture courses. Forms for software evaluation are included. The second part of the document is a report on a study conducted by the Texas Tech University at Lubbock, on integration of computer-based instruction in Texas vocational agriculture programs. The survey showed that Texas vocational agriculture teachers are using computers in their instruction, but that faster computers and more software are needed. This survey was the basis for the software development reported in the first part of the document. The third part of the document is an essay ("Survival of the Fittest") on the problems of first-year teachers, the causes of beginning-teacher droupout, and suggestions for helping first-year teachers get through the hard times and become proficient and experienced. References are included in the paper. Finally, appendixes to this document contain the computer programs developed in the software project. The programs include the following: The Gradebook Accountant, Land Judging Preparation, Plant Evaluation, 205-Day Adjusted Weaning Weight and Performance Evaluation, and Parliamentary Procedure. (KC)

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PERSONNEL TRAINING--SECONDARY VOCATIONAL AGRICULTURE TEACHER EDUCATION

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SPONSORED COOPERATIVELY BY
RESEARCH COORDINATING UNIT
DEPARTMENT OF OCCUPATIONAL EDUCATION AND TECHNOLOGY
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July 1, 1985

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U.S. DEPARTMENT OF EDUCATION
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CE042485

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PERSONNEL TRAINING--SECONDARY VOCATIONAL AGRICULTURE
TEACHER EDUCATION

There were two objectives of the project: (1) development, revision and evaluation of agricultural computer software for use in secondary vocational agriculture; (2) development of a program to assist first year instructors of vocational agriculture.

This report will be divided into two main areas: (1) computer aided instruction, and (2) the first year teacher dilemma.

I. Computer Aided Instruction:
   1. Software Development
   2. Software Evaluation
   3. Computer Survey

II. First year Teachers Program - Survival of the Fittest

SOFTWARE DEVELOPMENT

As a follow up to the Texas Tech study on integration of computer based instruction in Texas vocational agriculture programs, this project developed software needed by secondary teachers. Areas identified in the Tech study as highest priority are plant taxonomy, parliamentary procedure, grade book management, soil analysis and program budget. With assistance of the advisory committee, the computer language "C" was selected to use in developing the software. Appendix A contains the documentation for all the software developed by this project.

SELECTING AGRICULTURAL SOFTWARE

Selecting the proper application software is an important step toward using a microcomputer to solve problems or perform other useful tasks. Application software is a program or set of programs that tells the microcomputer how to perform a specific task - farm accounting, for example. Software for agricultural applications has been evolving rapidly during the past few years, and choosing the best software for your application can be confusing.

This is a general guide for current or potential microcomputer users who are thinking about buying agricultural software. Many different software packages are now available, and new ones are being added all the time. It is therefore impractical to give detailed information on particular software offerings. Instead, this publication presents guidelines that will help you evaluate the software available and select those programs or packages that are best suited to your application.

Although potential buyers of microcomputer systems are often tempted to buy the hardware first and look for useful software later, that approach can lead to serious disappointments. The wise selection of a microcomputer system involves three important steps:

1. Deciding what information can be of value to you and your students;
2. Identifying the software available for your application and determining whether it can accept, organize, and present the information you need;
3. Selecting a hardware system that is compatible with the software you expect to use, is compatible with other standard software that you might want to buy in the future, and can be expanded or upgraded when desired.

Through this process you will be able to determine what management information you need and how well a microcomputer can help in presenting that information in a useful form. You will then need to obtain cost information for the software, hardware, and any other necessary parts of a complete microcomputer system. Finally, you will have to weigh the cost of the system against the potential benefits of using a microcomputer.

TYPES OF MICROCOMPUTER SOFTWARE

Although microcomputer hardware may seem more intriguing than software, no microcomputer system will function without software. The software consists primarily of one or more computer programs and accompanying manuals that describe the programs and explain how to use them.

Operating system software - usually consisting of a group of related programs - is needed to direct the internal functions of the computer. The operating system controls the interaction between your application program and the microcomputer's hardware. Almost incessantly during its operation, the application program requests that instructions, data, or both be taken from or sent to a specific hardware unit (the keyboard, printer, disk drive, or display screen). The operating system translates those requests into the specific codes required by the hardware components.

A disk operating system (DOS) is a special form of operating system software for computer systems that incorporate one or more disk drives. The DOS performs very important functions. In addition to ensuring that data are transferred correctly between the microprocessor and the disk drive, the disk operating system catalogs the various data files stored on the disk in an efficient manner and produces a directory of those files. From the user's standpoint the DOS greatly simplifies storing data on the disk and retrieving it. It also provides application programs with convenient methods and commands for transferring data to and from the disks.

An unfortunate characteristic of microcomputers is that very few of the many available brands use the same DOS software. As a result, application software cannot be readily interchanged between microcomputers. Software written for use with one disk operating system will not usually work with a different operating system unless it is first modified.

The key to solving any problem or performing any task using a microcomputer system is a good application software program. Application programs are designed to perform specific functions for practical applications such as farm accounting. An application program consists of coded instructions that direct the microcomputer to accept data or commands from the user, process the data as the user desires, and then produce output in a readily usable form. Examples of agricultural applications range from performing simple computations - such as computing animal weight ratios, spray nozzle flow rates, or seeding rates - to more complex functions such as calculating least-cost rations, preparing financial statements, and projecting cash flows.

Groups of interrelated application programs are usually called software packages. For example, a financial software package may consist of separate application programs for entering transactions, writing checks, doing trial balances, and printing financial statements and other reports. Likewise, livestock or crop management packages usually contain several application programs for processing the various kinds of physical and financial information pertaining to these enterprises.

You can obtain application software packages in one of three ways:

1. You may purchase packaged software offered by a commercial software supplier (vendor or dealer) who specializes in developing and writing software programs. This type is commonly called "oft-the-shelf" software. The programs available have been designed to fit a broad range of user's needs. To be useful the packaged software must fit your situation reasonably well and perform to your expectations.

2. You may purchase modified, packaged software. This type of software package consists of off-the-shelf software that has been modified somewhat to meet unique needs. The minor modifications, which are usually relatively easy to make, add moderately to the cost.

3. You may contract for or purchase custom-designed software that has been specially designed for or adapted to your specific needs. Acquiring programs by this method is usually quite expensive because the development costs are not spread among many users.

A microcomputer owner may of course develop his/her own software given sufficient time, knowledge, desire, and patience. This method is not cost effective for most teachers because of the amount of time and effort required to design, develop, test, and implement effective application programs.

There is no "best" method for acquiring application software. Purchasing commercial packaged software, however, is probably the most practical for those who have important agricultural applications for their microcomputer systems.

A large number of software packages designed for specific farm applications are now available. They range from simple computational programs (to calculate, for example, spray nozzle flow rates or seeding rates) to more complex ones, such as least-cost ration formulation, cash flow projection, and financial record keeping. Livestock management packages are being used to assist with formulating rations, recording and analyzing breeding and production data, performing enterprise analyses, planning marketing strategies, and calculating breakeven production values.

Crop management software is available to help maintain crop and field records, calculate fertilizer application rates, analyze marketing plans, develop enterprise analyses, and computer breakeven values.

IDENTIFYING AND EVALUATING APPLICATION SOFTWARE

Choosing the proper software is a vitally important step toward applying a microcomputer successfully. Because of the large number of software packages available and because of the incompatibility among microcomputer programming languages, operating systems, and hardware, finding the right software for your needs is not a simple task.

After you have determined what types of information you need, you are ready to start your search for the application software that can help; you collect and organize that information. A good way to start is to make a list of the application software available from suppliers in your local area. Look for a knowledgeable and reputable local supplier to help ensure that you will receive adequate support. Of course, if good, appropriate application software and dependable supplier support are not available in your area, you will need to extend your search to more distant suppliers.

If possible, select three or four application software packages that all perform equivalent tasks. You can then compare how well the packages perform; that is, how well they do at providing the information you need.

If you already own a microcomputer, you will of course want to ensure that the software being considered will operate properly on your system. Be sure that each software package is compatible with your hardware and operating system and that it is written in a programming language that is available on your computer.

After you have identified several application software packages, evaluate each one's features. The evaluation process is necessarily somewhat subjective, but try to evaluate the software "from the inside out" and not the other way around. In other words, do not base your judgment only on the brand name, the outside packaging, and the supplier's claims. Test the programs by operating them yourself; do not rely solely on demonstrations conducted by the software supplier. As you test each package, ask yourself "Does this package meet the general requirements for good software?" and "Does it provide the specific information required for me?"

Your evaluation of each package should cover these elements:

1. The quality of the accompanying documentation (the user's guide and reference manuals);
2. The supplier's (vendor's or dealer's) ability and willingness to provide support and service;
3. The quality of the application program itself.

The "Software Evaluation Aid" is designed to guide you through the evaluation process to be described here. The form incorporates a scoring system that produces an average software rating, a number that indicates the general quality of the software package being examined. This rating can be used to compare different software packages.

The "Software Supplier Questionnaire" is a convenient checklist to help you evaluate the software supplier's support services. When completed, the form will give you a good idea of how well the supplier will support the software offered.

Clear, complete, and easy-to-use documentation is a very important part of a software package. Good documentation is often a sign of a good program.

The documentation may consist of printed materials such as "help" screens, prompts, and other messages that appear on the computer's screen. Often it includes both. Printed documentation falls into three basic categories: systems manuals, user's manuals, and operator's manuals. The user's manual is the most important one to examine when you are evaluating application software. The discussion in this section applies only to user's manuals for application software.

A good user's manual is usually divided into two main sections, one that teaches the user how to operate the program and another that contains detailed information about program commands and operations. The teaching or tutorial section should comprise the largest part of the manual. The reference information is usually presented in a separate part of the manual.

How can you spot good documentation? First, leaf through the manual to get a general impression of its contents and quality. Ask yourself these questions:

1. How much computer knowledge will I need to understand the manual? Is it written at a level that is easy to understand?
2. Are the instructions sufficiently detailed that a beginner could perform each step and operate the system?
3. Is the manual clearly organized and easy to follow?
4. Does it include helpful examples and illustrations?
5. Does the information in the manual pertain to the application?

Good manuals typically contain the following six elements:

An overview. This section describes the program in general terms. It usually describes the software's capabilities, its maximum capacity, the language used, the microcomputers on which it can be used, and other aspects of the program. It does not tell how to operate the program.

A tutorial section. This portion of the manual should provide step-by-step instructions and examples that show the user how to start the program and use all of the available commands. It should be written so that a beginner can understand and follow the directions. Descriptions should be clear and concise. The manual should include a generous number of illustrations, progressing from simple to more complex ones. Several examples of applications should be given with illustrations of typical screen displays and printed outputs. Good manuals usually include practical exercises and trial data that can be used to gain practice in operating the software.

A summary of commands. A reference section should describe all available commands and the options available with each command. It should give examples of how the commands are used. A removable reference card summarizing the commands is often provided.

A troubleshooting section. Information should be provided in this section to help the user diagnose and solve problems encountered when operating the software. It should also contain a detailed list of error messages and describe the steps to take when you encounter one. The troubleshoooting section, which is commonly contained in an appendix, is the second most important part of the manual.

A technical section. This part of the manual should describe the program logic, file layouts, and formulas used for special calculations. It should include a system flowchart. This information allows advanced users or programmers to modify or add to the package. (Remember, however, that if the software is modified, it most likely will no longer be supported by the supplier.) Technical information also makes it easier to link the program with other programs, which is sometimes done to allow the programs to share common data. Because few suppliers permit modification of their software packages, many manuals do not include a technical section.

A table of contents and an index. These parts of the manual are important aids in locating the information you need; they should be detailed and complete.

EVALUATING SUPPLIER SUPPORT

You will almost certainly need advice and assistance in installing new software on your system and using it effectively. As part of your evaluation of each software package you should therefore assess the supplier's (vendor's or dealer's) ability and willingness to assist with the installation, provide training, furnish updates, and provide service in case you encounter difficulties.

In the course of your evaluation, inquire about these six items, all of which are important parts of a strong software support program:

Telephone hotline. The software supplier should furnish a telephone number that you can call to obtain expert assistance. This type of after-sale support is the very least that one should expect. Many suppliers provide a toll-free number.

Warranty. Conventional software warranties range in duration from 0 to 90 days. At a minimum, the supplier should guarantee to replace defective disks, fix any "bugs" (program errors) that are discovered within a certain time period, and state in writing the exact hardware configurations or systems with which the software will operate. If the software fails to work with a system as advertised, the supplier should be obligated to make the necessary modifications or refund the buyer's money. Remember, if your rights as purchaser are not specified in writing, your recourse if you encounter difficulty is severely limited.

Low-cost backup copy. You should have at least two backup copies of each program in case the original program disk becomes defective. Some programs allow you to make an unlimited number of copies, giving you optimum protection against loss of the software if the original disk fails. Some programs, however, are internally protected against copying. In such cases, the program should be supplied with at least one backup copy, and it should be possible to order additional copies at low cost.

Low-cost updates. Reputable suppliers will continue to improve their software products after they are initially marketed. The supplier should offer a trade-in allowance to owners of earlier versions or provide them the opportunity to purchase updates at less than the full retail price within a reasonable period time (typically one year) after their initial purchase.

Local supplier service. Good agricultural software vendors require their local dealers to attend training classes so that a knowledgeable person will be available in the local area to answer the majority of questions a user might have.

Newsletters and seminars. Many suppliers provide free or low-cost newsletters containing information on matters such as software updates, program bugs, operating problems, and prices. In addition, some suppliers hold user seminars to provide more detailed information on the operation and use of the software. Program enhancements, planned updates, and new software being developed are also commonly discussed. Newsletters and seminars help to increase the useful lifespan of a software package.

Evaluating the Program

If you have found that the software packages you are evaluating include good documentation and are well supported by the supplier, you should then test the programs themselves. Listed here are eight features that are important indicators of good software.

Use of menus and prompts. A menu-driven program displays a list of options available to the user to control the operation of the program. The operator simply selects the desired option, making it unnecessary to memorize a series of command codes. Most farm application programs use menus to make program operation easier. Menu-driven programs can slow down experienced users, though, so look for a feature that allows the advanced operator to bypass some of the menus or processes.

Error handling. Evaluate how well the program handles errors that you or the microcomputer make. Test it by doing everything wrong; enter letters when it asks for numbers, insert the wrong diskette, and so on. The results will indicate whether the program contains good error-trapping routines. Competently written programs will stop and warn the operator when an obvious mistake has been made.

Program accuracy. Make certain that the program does not commit any obvious computational errors and that it does not include any conceptual or design flaws. Your test will of course have to be limited to detecting obvious program "bugs". If any minor errors are present, you will not likely discover them until you have used the program for a while.

Operating speed. If possible, test the program's operating speed. The information you obtain can be quite useful if the program will be used to process large amounts of data. For example, two programs may process a month's accounting information in about the same amount of time. When used to process data for an entire year, however, their speeds may be noticeably different. You will have to decide whether this test is worth the effort and how important the results will be in your operation. It is worth noting that a program which has been compiled (not supplied to you in the source language) will almost always operate faster than one that is written in a language such as BASIC, which is processed by an interpreter when it is executed.

Printout options. The most flexible programs allow the use of input data in many different ways. A good program will provide certain standard reports but also allow the user the option of creating special or tailor-made reports. For certain types of applications, it is helpful if the program allows the user to print data collection worksheets (for livestock and financial data, for example). These worksheet forms can be used to help in gathering and organizing the data that will be used as an input to the program.

Ease of use. The program should be able to lead the user through the functions with a minimum of difficulty and confusion. It should also be relatively easy to install, start, and operate. It should make clear what information the operator must provide and how to enter it.

Ease of modification. Determine whether the program can be modified or customized to meet the individual user's needs. The degree of modification may range from extensive--altering the source code--to minor--defining program categories and report formats. Look for programs with options designed to increase their flexiblility and make them expandable to accommodate future needs.

Agricultural standardization. Consider how appropriate the program is for the agricultural tasks you want it to accomplish. Try to find out whether the program was developed specifically for the application or consists of standard commercial software that has simply been modified or adapted for use in agriculture. Also, check whether the program adheres to accepted agricultural standards in such matters as report formats and the formulas used for calculations.

After you have completed your basic examination of the software's documentation, the available supplier support, and the general quality of the program itself, you will be ready to examine the software's specific features in greater detail. This is the time to determine how successful each one would be in providing the management information you need.

As a final step in your evaluation, obtain from the software supplier the names of five people in your area who are currently using the software packages you are considering. Contact these users and ask their opinions about the software. The information you obtain from them may save you considerable time and money.

* Taken from Selecting Agricultural Software, University of Illinois at Urbana-Champaign. Written by Gary W. Buller. July 1984.

SOFTWARE EVALUATION AID

Instructions: This form is designed to help summarize your results as you evaluate different agricultural software packages. Make extra copies of the form and use one copy for each software package you evaluate. Fill in each section of the form as you conduct your evaluation, following the procedure described in this circular.

The form consists of four sections. The first provides a place to record basic information about the software and the supplier. The other three sections list important features of the documentation, the supplier support, and the program. A range of scores is given for each feature. As you evaluate the software, enter a score within the range indicated. The largest number in the range is the best score, the lowest is the poorest. For example, if the score range for a particular feature is from 1 to 15 , a score of 1 indicates that the software is very weak in this feature, whereas a 15 indicates that it is excellent.

When you have completed your evaluation, add up the scores for each of the three sections. The maximum total score for each section is 100 points. Then add the scores for the three sections together and divide the total by 3. The result is the average software rating, a composite score that indicates the overall quality of the software. This rating can be used to compare different software packages.

Name of software package _____

Supplier's name and address _____

_____

Contact person _____ Telephone _____

Purpose of software _____

Hardware required _____

Operating system and programming language _____

_____

Other requirements _____

Date of first installation _____ Cost _____

I. DOCUMENTATION

Feature	Score Range	Evaluation Score
1. Overview	1-10	_____
2. Tutorial section	1-30	_____
3. Summary of commands	1-15	_____
4. Troubleshooting guide	1-25	_____
5. Technical section	1-10	_____
6. Table of contents and index	1-10	_____
Documentation Total (add scores for features 1 through 6)		_____

II. SUPPLIER SUPPORT

Feature	Score Range	Evaluation Score
1. Telephone hotline	1-20	_____
2. Warranty	1-20	_____
3. Low-cost backup copies	1-15	_____
4. Low-cost updates	1-15	_____
5. Training	1-10	_____
6. Local dealer service	1-10	_____
7. Newsletter and seminars	1-10	_____
Vendor Support Total (add scores for features 1 through 7)		_____

III. APPLICATION PROGRAM

Feature	Score Range	Evaluation Score
1. Use of menus and prompts	1-10	_____
2. Error handling	1-15	_____
3. Program accuracy	1-15	_____
4. Operating speed	1-10	_____
5. Printout options	1-10	_____
6. Ease of use	1-15	_____
7. Ease of modification	1-10	_____
8. Conformity with agricultural standards	1-15	_____
Application Program Total (add scores for features 1 through 8)		_____

SUMMARY

I. Documentation total* . . . . . _____

II. Supplier support total*. . . . . _____

III. Application program total* . . . . . _____

Grand Total (sum of I, II, and III). . . . . _____

Average Software Rating (divide grand total by 3) . . . . . _____

*If the total number of points in any of these three major categories is less than 50, the product should probably be eliminated from the selection process.

SOFTWARE SUPPLIER QUESTIONNAIRE

Supplier's name and address _____

_____

_____

Contact person _____ Telephone _____

_____

1. How long has your company been in business?
   List several refrences.

2. List five current customers using your farm application software. Give names, addresses, and telephone numbers.

3. Can the user's manual or a demonstration version of the program be acquired before purchasing the software? What is the cost?

4. Describe your software warranties. Will you replace defective disks and correct program bugs without charge? For how long after sale of the software?

5. Do you offer training? If so, what type of training do you provide? How long does it take? Is it free or do you charge for this service?

6. Do you provide a telephone hotline that the user can call for expert assistance and information?

7. Do you have a programmer on your staff to maintain and modify your software packages? How much do modifications cost?

8. What is your policy on the cost of software updates? Does the purchaser receive them automatically? Is there any charge?

9. Will you include the terms of your software proposal in a written contract?

10. Do you provide a newsletter or user seminars and workshops?

SURVEY OF COMPUTER USE BY VOCATIONAL AGRICULTURE IN TEXAS

JUNE 30, 1985

TEXAS A&M UNIVERSITY
COLLEGE STATION, TEXAS

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Chapter I.

INTRODUCTION

The Texas Education Association understands the importance of the computer for state vocational agriculture programs and they commissioned a study to document the status of computing in Texas vocational agriculture. Two studies were carried out. The first was the "Integration of Computer Related Instruction in Texas Vocational Agriculture Programs" by the Texas Tech University at Lubbock, Texas, in 1984. The second is this report, carried out by the Agricultural Education Department of Texas A&M University.

Public education in Texas has the mission to train our youth for their future role in society. To do this effectively, "educational practitioners must remain constantly aware of new developments in the field of education" (Wolf and Haveline, 1973).

Computers are a "new" development for education. So what? There have always been "new" technologies that threaten our "normal" way of life. Automatic transmissions were available in 1950, yet were not commonly used in automobiles until the late 1950's. Photocopy machines were available in 1950, yet were not common until about ten years ago. There is always a "time-lag" between initial introduction of a new technology and its common adoption.

A new technology is just a new tool to help us extend our ability to do work. The automatic transmission minimized the bother of shifting gears. The photocopier enabled us to reproduce documents over and over again (legally or otherwise!). These are just tools that help us do our work. The computer is just another tool.

Having said that, let me say that the computer is shaking up the field of education like no other tool since the printing press. The power of a computer is in its ability to handle thousands of pieces of information at a time. This information-processing force is smouldering in the undergrowth of the educational woods. The winds of change are blowing and the spark will soon burst out into a leaping forest fire of new learning opportunities.

The coming system of learning will depend heavily on mature, wise teachers and administrators who understand what information students need to know, and where that information can be found. The computer is the lightning-fast beast-of-burden that goes and fetches the information and then helps the instructor to teach it in the most appropriate manner.

This humble slave-machine will also help the instructor to track the progress of each student, reinforcing the teacher's skill at teaching different materials to different students, according to their abilities. The computer is only a tool, but it is a valuable tool for teachers who want to teach beyond their fullest potential.

The potential of this tool for assistance to teachers is unlimited in vocational education. Students are learning tangible, physical skills in cause and effect relationships. Results of the education are visible--they can see the broken engine run again, they can see barren earth break open with food. Cause and effect is the driving logic behind computer "IF/THEN" operations. Students use this logic in problem-solving; "IF I go to school, THEN I can be taught". IF/THEN activities put in a future tense allow prediction of the possible outcomes of an action. Simulation is "examination of a problem often not subject to direct experimentation" (Mish, 1984).

Teachers and their supervisors need a tool to help them predict the future. Haimann states "It is not uncommon for supervisors to review their years of work and, with hindsight, lament that they did not take seriously certain trends which had already been visible in earlier times" (Haimann, T., and Hilgert, T., 1982).

This simulation capability is needed for future agribusiness workers. Understanding cause and effect relationships is essential for success in the modern agricultural business. Choosing crop and livestock enterprises depends on predicting the future. Spot-market prices for all agricultural commodities change because of the moment-by-moment variations in the predictions of future markets.

Agricultural educators can give practical experience in predicting the future effects of present actions. Educators can train students to anticipate results of management decisions. This practical, meaningful, management experience is provided by computer simulation. Vo-Ag teachers realize the value of this great tool and they should have computers available to maximize their ability to train students for the future.

Chapter II.

METHODS AND PROCEDURES

Subject of the Survey

The study carried out was a survey of the 985 vocational agricultural departments in the ten geographic areas of Texas.

The Survey Instrument

The somewhat similar study done by Texas Tech was found useful in building a foundation for this study.

The instrument used was developed by Joe Townsend and John Carnes in the Agricultural Education Department of Texas A&M. The instrument included short answer, listing, and open-ended questions. The survey consisted of six parts: Current use of computers in Vocational Agriculture, Computers and Enhancements available for use by Vo-Ag, Computer Peripherals available for use by Vo-Ag, Computer Software currently available for use by Vo-Ag, Areas for Software Development in Vo-Ag, Computer in-Service Courses.

Data Collection

Three mailings of the instrument were carried out (appendices A and B): the initial mailing (November, 1984), and two follow-up mailings (January and February, 1985) to those not responding to the initial mailing.

Chapter III.

RESULTS

Out of 985 surveys that were sent out, 402 responses were returned by May 1985, for a return rate of 44%. The following is a compilation of those surveys returned. All of the data reported in this paper are limited to the 402 respondents.

Table 1

Proportions of computer, by type:

Type of Computer	Number of Computers	Percentage of Total Computers	Number of Schools	Percentage of Total Schools
Apple	548	52.2	102	47.9
TRS 80	293	27.9	61	28.6
Commodore	116	11.1	18	8.5
IBM	38	3.6	13	6.1
Texas Instrument	18	1.7	9	4.2
Other	36	3.4	10	4.7
	1049		213	

The following six tables have the numerical totals from the survey.

Table 2

SECTION 1: CURRENT USE OF COMPUTERS IN VOCATIONAL AGRICULTURE

11 1. I have used computers in the past, but I decided not to use computers in the future.

62 2. I have not used computers, and I do not plan to use computers in the future.

157 3. I have not used computers, but I plan to begin using computers sometime after the 1985/86 school year.

93 4. I have not used computers, but I plan to begin using computers sometime during the 1984/85 or the 1985/86 school years.

79 5. I use computers as part of my vo-ag program.

Table 3

SECTION 2: COMPUTERS IN USE

446	APPLE II+ & IIE
319	One Disk Drive
107	Second Disk Drive
125	64K RAM Expansion
138	80 Column Card
9	CP/M Card
102	APPLE IIC
40	Second Disk Drive
80	COMMODORE 64
40	One Disk Drive
6	Second Disk Drive
11	80 Column Cartridge
17	CP/M Cartridge
36	COMMODORE PET
5	One Disk Drive
5	Second Disk Drive
38	IBM PC/PC JUNIOR
25	One Disk Drive
27	Second Disk Drive
9	64K RAM Expansion
41	(128K RAM Total)
18	TEXAS INSTRUMENTS 99/4A
8	One Disk Drive
3	Second Disk Drive
168	TRS-80 MODEL III
43	One Drive
67	Second Disk Drive
22	Model 4 Up-Grade
125	TRS-80 MODEL 4/4P
37	One Disk Drive
78	Second Disk Drive
17	64K RAM Expansion
36	OTHER COMPUTERS
2	One Disk Drive
3	Second Disk Drive

Table 4

SECTION 3: COMPUTER "PERIPHERALS" AVAILABLE FOR USE BY VO-AG

266	PRINTERS
220	Dot Matrix Printers that can print 132 Characters per line
46	Daisy Wheel Printers that can accept a piece of paper 13 inches wide
12	MODEMS (Telephone "Hookup")
7	300 BAUD Modems
5	1200 BAUD Modems
14	OTHER PERIPHERALS

Table 5

SECTION 4: COMPUTER SOFTWARE CURRENTLY AVAILABLE FOR USE BY VO-AG

Familiarity			Item
Available	"Familiar" With It	Both	
23	32	25	SPREADSHEET SOFTWARE Visicalc (Original)
5	4	10	Visicalc 4.(
2	14	5	Multiplan
1	1	1	Supercalc 2 or
4	4	2	Lotus 1,2,3
			WORDPROCESSING SOFTWARE
19	20	23	Scripsit or Superscripsit
24	11	17	Apple Writer
12	5	3	Bank Street Writer
4	4	0	Wordstar
			DATABASE SOFTWARE
28	14	29	Profile, PFS, dBase
			INTEGRATED SOFTWARE PACKAGES
25	12	12	Apple Works, Framework, Symphony

Table 6

SECTION 5: AREAS FOR SOFTWARE DEVELOPMENT IN VO-AG

MANAGEMENT AREA (Six choices per respondent)

199	Gradebook (Grades and Attendance)
155	Department Budget
245	Department Inventory
73	Department Equipment Maintenance Records
112	Stock Show Records (Weights-Sift-Placing-Auction List, etc.)
130	Mailing List (Young Farmers, Stock Show Buyers, Etc.)
168	State and Federal Reports (VEDS, Travel, Etc.)
242	Student File (SOEP, FFA Awards & Participation, Follow-up)
193	Test Generation (Store Questions, Change or Add Questions, Print Tests, Etc.)
172	Lesson Plans
37	FFA Contest Scoring
15	Other

INSTRUCTIONAL AREA (Twelve choices per respondent)

114	Formulating Least Cost LIvestock Rations
141	Balancing Livestock Rations
119	Keeping Livestock Production Records (ADG, Wt/Day Age, Etc.)
76	Learning Livestock Genetics
89	Keeping Livestock Breeding Records (Gestation Period, Date to Breed, Etc.)
92	Identifying the Breeds of Livestock & Poultry
50	Sampling and Analyzing Soils
82	Determining Recommended Fertilization Rates
50	Evaluating and Classifying Land
76	Identifying Range & Pasture Plants
19	Identifying Horticultural Plants
20	Learning General Plant Taxonomy
134	Figuring a Bill of Materials
86	Figuring Concrete Quantity and Ingredients
58	Maintaining Small Gasoline Engines
73	Rebuilding Small Gasoline Engines
65	Reading Measuring Tools (Ruler, Micrometer, Etc.)
114	Keeping Farm Records
161	Keeping the Texas FFA Recordbook
72	Figuring Depreciation (Straight Line, Declining Balance, Etc.)
94	Figuring Federal Income Tax
126	Simulating Parliamentary Procedure Problems
112	Preparing for the FFA Greenhand Quiz Contest
92	Learning About Careers in Agriculture
72	Selecting a Career in Agriculture
19	Conserving Energy in Agriculture
33	Preparing for Ag chemical Certification (Chemical Safety)
24	Other

Table 7

SECTION 6: COMPUTER IN-SERVICE COURSES

(One choice per respondent)

18	I would not attend a computer related in-service course
81	General Computer "Literacy"
31	Beginning Basic Programming
9	Using Wordprocessing Software
9	Using Spreadsheet Software
14	Using Database Software
204	Using Vo-Ag Instructional Software

Chapter IV.

SUMMARY

Texas Vo-Ag teachers are using computers in their instruction. They are preparing students for future roles in leadership. The first steps have been taken--getting students in contact with computer tools. The first steps have introduced simpler tools of quiz programs and tutorials that amount to glorified "page-turners". Other common programs are elementary record-keeping and word processing programs. These programs, along with games, have been ideal for the first tentative steps of computer use. These packages have been perfect for overcoming the "newness" of the computer as a tool for everyday life. Computers are in our watches, our cameras, and now in our classrooms and homes. Now we know that they can be used; we have helped students to learn the simpler uses of computers.

Now it is time to pursue the next steps of using the computer tool. The small, simple computers have gone far beyond their optimum use in efforts to provide more useful services to educators. The original machines soon seemed too slow, too limited, and too restrictive. Teachers have proved brilliant in enhancing their equipment with patched-in extra disk drives, ram chips, and CP/M cards. Their efforts have been heroic, but the little machines were not designed to handle the real-life activities that teachers want to share with students.

Eight-bit processors, like most of the Texas Vo-Ag computers, are physically incapable of manipulating enough data simultaneously to provide realistic interaction with students in simulation cause and effect learning activities. Machines that can integrate with a student's phenomenal learning ability must be fast communicators, using combinations of displayed words, graphical illustrations, and sound to build student involvement. The business world is fast moving. Business decision making simulations must handle information quickly. The 16-bit computer, as in the IBM Personal Computer (PC), has been the industry standard for new educational simulation programs. Program designers are adopting PC-Power (or compatible machines) as the standard for new programs. The Apple Macintosh is also becoming a significant part of the educators equipment.

Students learning computer skills in the primary and secondary schools must understand the computer as a business tool, not just as a toy.

> The Macintosh has "sold well, but to individuals not businesses...Meanwhile, IBM was surging ahead with its own PC's and may already have pre-empted the market among the country's biggest companies... A recent survey of large corporations by Future Computers Inc. found that 72 percent of them planned to buy IBM personal computers, while only 5 percent were opting for Apples" (Pauly, D., and Rogers, M., 1985).

There are many educators in Texas using these powerful machines. They have found a much-greater availability of teaching resources that help students to practice making adult decisions that are real-to-life. Texas vocational agriculture has a reputation for being on the fore-front among vocational education programs in the United States. This leadership role is the result of decades of wise planning by the Texas Education Agency and the Vocational Instructional Services Center; yet this role may be lost if our look toward the future can't see beyond what was done in the past. Knowledgeable Texas teachers and administrators are not just complaining when they say that their educational curriculum is outdated. Vocational training in computer data entry "for a batch environment on mainframes is 10 years out of date".

The Vocational Education curriculum must be overhauled to focus on realistic application of useful skills in:

1. Word Processing
2. Simple Database Applications
3. Spreadsheet Use

Emphasis on applications packages will improve productivity much more than learning programming and mainframe batch processing.

If our survey is a reasonably accurate portrayal of vocational educators in Texas, then Table 7 shows that they are desperate for training in "using Vo-Ag Instructional Software", and in "General Computer Literacy".

Texas has good vocational teachers. Let us support them. Let us give them a useful curriculum. Let us help them get modern equipment. Our work is not to perpetuate incompetence, it is to teach young people how to reach their fullest potential in life; train them in skills for today's life.

SELECTED BIBLIOGRAPHY

Haimann, T., and Hilgert, T. Supervision: Concepts and Practices. Southwest Publishing, Cincinnati, 1982.

Mish, F.C., ed. Webster's Ninth Collegiate Dictionary. Merriam-Webster, Springfield, 1984.

Wolf, W., and Havelock, M. Training for Change Agents. Institute for Social Research, Ann Arbor, 1973.

Pauly, D., and Rogers, M. "Apple Computer's Bruising Times". Newsweek, May 27, 1985. pp. 46-47.

APPENDICES

APPENDIX A

COVER LETTERS

November 2, 1984

M E M O R A N D U M

TO: Teachers of Vocational Agriculture

FROM: Joe Townsend & John Carnes
Professional Development Program
Department of Agricultural Education
Texas A&M University
College Station, Texas 77843

SUBJECT: Sources of Computer Software for Vocational Agriculture

If you happened to notice who sent you this memo, you're probably wondering, "What is a Professional Development Program?" Well, our purpose is to help vo-ag teachers in Texas become better professionals (teachers). Your help would be very valuable in accomplishing this objective

One of our jobs will be to help vo-ag teachers sort through the "computer maze." You read and hear all kinds of stories about the coming of the "information age" and how "high technology" will affect our everyday lives. Some of these stories are exaggerated, but underneath the "sales talk" lie some valuable tools for vo-ag teachers.

A lot of teachers have found practical uses for computers in their vo-ag programs, and we believe more will get involved with computers. Perhaps the biggest problem has been finding good "software". That's what this memo is all about. We're trying to find out what kinds of computers are being used, so a critical review may be made of existing software, and software may be developed specifically for Texas vo-ag teachers.

Please take a few minutes, and complete the enclosed survey. Your efforts will help ease us all into the "computer age." You may not feel fully qualified to answer some of the questions the survey will ask. If so, visit with the school "computer person," or whoever else you trust as your computer "expert". He/she should be able to interpret for you. Although the attached survey looks long, this bulk is the result of an attempt to make completing the survey faster and easier.

In return for your efforts, we plan to provide every vo-ag department that properly completes and then returns this survey with a **comprehensive and critical review of computer software appropriate for vo-ag** in Texas. In addition, you will receive a **free disk of software** for the major makes of computers used by vo-ag teachers in Texas.

APPENDIX B

QUESTIONNAIRE

SURVEY OF COMPUTER USE BY VOCATIONAL AGRICULTURE IN TEXAS

Developed By
The Professional Development Program

In Cooperation With
The Research Coordinating Unit, Texas Education Agency
The Agricultural Education Program, Texas Education Agency
The Department of Agricultural Education, Texas A&M University

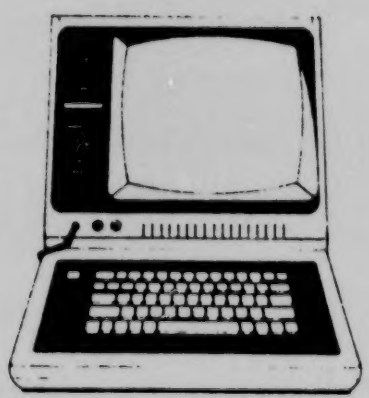
ANIMAL SCIENCE

PLANT SCIENCE

S. O. E. P.

AGRICULTURAL MECHANICS

OPPORTUNITIES IN AGRICULTURE



SOIL SCIENCE

LEADERSHIP

AGRICULTRAL MANAGEMENT

ENVIRONMENTAL PROTECTION

ENERGY CONSERVATION

SECTION 1: CURRENT USE OF COMPUTERS IN VOCATIONAL AGRICULTURE

DIRECTIONS

Please check (✓) the **ONE** statement below that best describes the use of computers in your vo-ag program.

___ 1. I have used computers in the past, but I decided not to use computers in the future.

___ 2. I have **not** used computers, and I do **not** plan to use computers in the future.

___ 3. I have **not** used computers, but I plan to begin using computers sometime after the 1985/86 school year.

___ 4. I have **not** used computers, but I plan to begin using computers sometime during the 1984/85 or the 1985/86 school years.

___ 5. I use computers as part of my vo-ag program.

END OF SECTION 1

If you checked either number **1 or 2**, PLEASE GO TO SECTION 6 ON PAGE 9.

If you checked number **3**, PLEASE GO TO SECTION 5 ON PAGE 7.

If you checked either number **4 or 5**, PLEASE GO TO SECTION 2 ON PAGE 2.

SECTION 2: COMPUTERS AND "ENHANCEMENTS" AVAILABLE FOR USE BY VO-AG

We are interested in only the computer equipment that your vo-ag classes use, or are likely to use--not all of the computers owned by your school district. Use common sense to save yourself the trouble of tracking down equipment that you will probably never use. Also, "if you don't know what it is, you probably ain't got one!" So don't let the "computerese" get to you! Just help us out as much as your busy schedule permits.

DIRECTIONS

First review the example, then in the spaces provided, indicate the **NUMBER** of various computers and computer enhancements available for use by your vo-ag classes. If you do not feel fully qualified to complete this section, please contact the school "computer person," or whoever else you trust as your computer "expert" for assistance. Also, do not list printers, modems or software as "enhancements"; these will be covered later. Computer enhancements are similar to "extras" on a motor vehicle, and often include such things as disk drives and extra memory.

EXAMPLE

Suppose the VOE teacher next door has a room full of TRS-80 computers. The VOE teacher knows a lot about computers, and is easy to work with. Say the elementary school has a "ship" load of Commodores, but they are located across town. Also, the math department has a bunch of Apples, but the math teacher thinks vo-ag is for "dummies" and computers are best utilized by "academic" classes. What equipment should you report? Probably, the TRS-80 computers. In this situation, the Commodores and Apples will probably not be available for use by vo-ag classes.

Please try to select the **ONE MAKE** of computer you are most likely to use. Even, if the math teacher were better informed, you would probably end up using the VOE equipment because it is right next door. However, do report similar models within a make of computer. Often similar models within a make of computer can use the same software.

VOE has five TRS-80 Model 4s with one disk drive each, four TRS-80 MODEL 4s with two disk drives each, and one TRS-80 Model 4 with two disk drives and a 64K RAM expansion unit.

You would respond as follows. Do not use the example to report your computers! The spaces you will fill out begin on the next page.

10 TRS-80 MODEL 4/4P
5 One Disk Drive
5 Second Disk Drive
1 64K RAM Expansion
(128K Total RAM)

Describe Other Model 4/4P Enhancements (Number, Item, Make & Model).

____ _____ . _____ . _____
____ _____ . _____ . _____

If you are still not sure of what we are asking, give a call at (409) 845-2951. Ask for Joe Townsend or John Carnes. If we are out, either Gary Briers or Steve Wilson can answer your questions.

PLEASE GO TO PAGE 3 AND COMPLETE SECTION 2

BEGIN COMPLETING SECTION 2 HERE

DIRECTIONS

In the spaces provided, indicate the **NUMBER** of various computers and computer enhancements available for use by your vo-ag classes.

___ APPLE II+ & IIE
- ___ One Disk Drive
- ___ Second Disk Drive
- ___ 64K RAM Expansion (128K RAM Total)

Describe Other Apple II+ or IIE Enhancements (Number, Item, Make & Model).
- ___ 80 Column Card . _____ . _____
- ___ CP/M Card . _____ . _____
- ___ _____ . _____ . _____
- ___ _____ . _____ . _____

___ APPLE IIC
- ___ Second Disk Drive

Describe Other Apple IIC Enhancements (Number, Item, Make & Model).
- ___ _____ . _____ . _____
- ___ _____ . _____ . _____

___ COMMODORE 64
- ___ One Disk Drive
- ___ Second Disk Drive

Describe Other Commodore 64 Enhancements (Number, Item, Make & Model).
- ___ 80 Column Cartridge . _____ . _____
- ___ CP/M Cartridge . _____ . _____
- ___ _____ . _____ . _____
- ___ _____ . _____ . _____

___ COMMODORE PET
- ___ One Disk Drive
- ___ Second Disk Drive

Describe Other Commodore 64 Enhancements (Number, Item, Make & Model).
- ___ 80 Column Display . _____ . _____
- ___ CP/M Enhancement . _____ . _____
- ___ _____ . _____ . _____
- ___ _____ . _____ . _____

___ IBM PC/PC JUNIOR
- ___ One Disk Drive
- ___ Second Disk Drive
- ___ 64K RAM Expansion (128K RAM Total)
- ___ 128K RAM Expansion (256K RAM Total)

Describe Other IBM PC/PC Junior Enhancements (Number, Item, Make & Model).
- ___ _____ . _____ . _____
- ___ _____ . _____ . _____

SECTION 2 CONTINUED ON PAGE 4

SECTION 2 CONTINUED BELOW

TEXAS INSTRUMENTS 99/4A

___ One Disk Drive
___ Second Disk Drive

Describe Other TI 99/4A Enhancements (Number, Item, Make & Model).

___ _____ . _____ . _____
___ _____ . _____ . _____

___ TRS-80 MODEL III

___ One Drive
___ Second Disk Drive
___ Model 4 Up-Grade
64K RAM Expansion
(128K Total RAM)

Describe Other TRS-80 Model III Enhancements (Number, Item, Make & Model).

___ _____ . _____ . _____
___ _____ . _____ . _____

___ TRS-80 MODEL 4/4P

___ One Disk Drive
___ Second Disk Drive
___ 64K RAM Expansion
(128K Total RAM)

Describe Other TRS-80 Model 4/4P Enhancements (Number, Item, Make & Model).

___ _____ . _____ . _____
___ _____ . _____ . _____

OTHER COMPUTER MAKE AND MODEL

___ _____ _____

___ One Disk Drive
___ Second Disk Drive

Describe Other Enhancements (Number, Item, Make & Model).

___ _____ . _____ . _____
___ _____ . _____ . _____
___ _____ . _____ . _____
___ _____ . _____ . _____

OTHER COMPUTER MAKE AND MODEL

___ _____

___ One Disk Drive
___ Second Disk Drive

Describe Other Enhancements (Number, Item, Make & Model).

___ _____ . _____ . _____
___ _____ . _____ . _____
___ _____ . _____ . _____
___ _____ . _____ . _____

END OF SECTION 2

PLEASE GO TO SECTION 3 ON PAGE 5.

SECTION 3: COMPUTER "PERIPHERALS" AVAILABLE FOR USE BY VO-AG

In this section, we are interested in the types of printers and modems that vo-ag teachers use, or are likely to use. If you use or are likely to use other types of computer peripherals ("mouse", light pen, graphics tablet, plotter, etc.), report them in this section under "other peripherals." If necessary, please get a local computer "expert" to help.

DIRECTIONS

In the spaces provided, indicate the **NUMBER** of various computer peripherals available for use by your vo-ag classes.

____ PRINTERS

____ Dot Matrix Printers That Can Print 132 Characters Per Line (Condensed)
(If in doubt, please check the printer manual.)

____ Daisy Wheel Printers That Can Accept a Piece of Paper 13 inches wide
(Use a ruler!)

____ MODEMS (Telephone "Hookup")

____ 300 BAUD Modems

____ 1200 BAUD Modems

OTHER PERIPHERALS

Describe Any Other Peripherals That You Use or Are Likely to Use (Number, Item, Make & Model).

____ _____ . _____ . _____
____ _____ . _____ . _____
____ _____ . _____ . _____
____ _____ . _____ . _____
____ _____ . _____ . _____
____ _____ . _____ . _____

END OF SECTION 3

PLEASE GO TO SECTION 4 ON PAGE 6.

SECTION 4. COMPUTER SOFTWARE CURRENTLY AVAILABLE FOR USE BY VO-AG

In this section, we are interested in the types computer software that vo-ag teachers use or are likely to use. Also, we want to know what software vo-ag teachers are "familiar" with. Familar doesn't mean expert! We just want to know if you have used the software. If necessary, please get a local computer "expert" to help.

DIRECTIONS

Please check (✔) the software available for use by vo-ag classes, and then check (✔) the software that you or another teacher in your department are "familiar" with.

Vo-Ag Available?	"Familiar" With It?	
		SPREADSHEET SOFTWARE
___	___	Visicalc (Original)
___	___	Visicalc 4.0
___	___	Multiplan
___	___	Supercalc 2 or 3
___	___	Lotus 1.2.3

Describe Other Spreadsheet Software (Available, "Familiar," Name & Publisher).

___ ___ _____ . _____

		WORD PROCESSING SOFTWARE
___	___	Scripsit or Superscripsit
___	___	Apple Writer
___	___	Bank Street Writer
___	___	Wordstar

Describe Other Word Processing Software (Available, "Familar," Name & Publisher).

___ ___ _____ . _____

		DATABASE SOFTWARE
___	___	Profile III or III+
___	___	PFS File/Report
___	___	dBase II or III

Describe Other Database Software (Available, "Familar," Name & Publisher).

___ ___ _____ . _____

		INTEGRATED SOFTWARE PACKAGES
___	___	Apple Works
___	___	Framework
___	___	Symphony

Describe Other Integrated Software Package (Available, "Familar," Name, & Publisher).

___ ___ _____ . _____

OTHER SOFTWARE

Describe Other Software You Feel Is Important (Available, "Familar," Name & Publisher).

___ ___ _____ . _____

___ ___ _____ . _____

END OF SECTION 4

PLEASE GO TO SECTION 5 ON PAGE 7

SECTION 5: AREAS FOR SOFTWARE DEVELOPMENT IN VO-AG

In this section, we are interested in the types vo-ag software that teachers feel should be critically reviewed, or if not available, vo-ag software that should be developed. This section breaks vo-ag software into two areas: management and instructional. Management software helps teachers organize their paperwork, while instructional software "teaches" students.

DIRECTIONS

First glance through this page and the next page to become familiar with the two areas of vo-ag software. Then, check (✔) the **SIX** most important types of management software. If you feel we have left out an important type of management software, write it in and check it. In any case, do not check more than six types of management software.

MANAGEMENT AREA

___ Gradebook (Grades and Attendance)
___ Department Budget
___ Department Inventory
___ Department Equipment Maintenance Records
___ Stock Show Records (Weights, Sift, Placing, Auction List, Receipt to Buyer, etc)
___ Mailing List (Young Farmers, Stock Show Buyers, Etc.)
___ State and Federal Reports (VEDS, Travel, Etc.)
___ Student File (SOEP, FFA Awards, FFA Participation, Follow-up, Etc.)
___ Test Generation (Store Questions, Change or Add Questions, Print Tests, Etc.)
___ Lesson Plans
___ FFA Contest Scoring
___ _____
___ _____
___ _____
___ _____
___ _____
___ _____

SECTION 5 CONTINUED ON PAGE 8

SECTION 5 CONTINUED BELOW

INSTRUCTIONS

Please check (✓) the 12 most important types of instructional software. If you feel we have left out an important type of instructional software, write it in and check it. In any case, do not check more than 12 types of instructional software.

INSTRUCTIONAL AREA

___ Formulating Least Cost Livestock Rations
___ Balancing Livestock Rations
___ Keeping Livestock Production Records (ADG, Wt/Day Age, 205 Day Adj. Wt., Etc.)
___ Learning Livestock Genetics
___ Keeping Livestock Breeding Records (Gestation Period, Date to Re-Breed, Etc.)
___ Identifying the Breeds of Livestock & Poultry
___ Sampling and Analyzing Soils
___ Determining Recommended Fertilization Rates
___ Evaluating and Classifying Land
___ Identifying Range & Pasture Plants
___ Identifying Horticultural Plants
___ Learning General Plant Taxonomy
___ Figuring a Bill of Materials
___ Figuring Concrete Quantity and Ingredients
___ Maintaining Small Gasoline Engines
___ Rebuilding Small Gasoline Engines
___ Reading Measuring Tools (Ruler, Micrometer, Etc.)
___ Keeping Farm Records
___ Keeping the Texas FFA Recordbook
___ Figuring Depreciation (Straight Line, Declining Balance, Sum-of-the-Years-Digits, Etc.)
___ Figuring Federal Income Tax
___ Simulating Parliamentary Procedure Problems
___ Preparing for the FFA Greenhand Quiz Contest
___ Learning About Careers in Agriculture
___ Selecting a Career in Agriculture
___ Conserving Energy in Agriculture
___ Preparing for Ag Chemical Applicators Certification (Chemical Safety)
___ _____
___ _____
___ _____
___ _____
___ _____
___ _____
___ _____
___ _____
___ _____
___ _____
___ _____

END OF SECTION 5

PLEASE GO TO SECTION 6 ON PAGE 9

SECTION 6: COMPUTER IN-SERVICE COURSES

If all the computer in-service courses listed below were available, which **ONE** would you attend? Please check (✔) only **ONE** of the items below. If you prefer a course not listed below, write it in and check it. In any case, please check only one.

____ I would not attend a computer related in-service course
____ General Computer "Literacy"
____ Beginning Basic Programming
____ Using Wordprocessing Software
____ Using Spreadsheet Software
____ Using Database Software
____ Using Vo-Ag Instructional Software
____ _____

To insure that you receive the vo-ag software review and disk of vo-ag programs, list the name of your high school and the city where it is located in the spaces below.

High School: _____
City: _____

Please share any comments or suggestions below.

WE APPRECIATE YOUR COOPERATION! Once you return this survey, you will have provided information needed to help vo-ag teachers across the state better utilize computers.

PLEASE TURN THE PAGE TO RETURN THE SURVEY

FOLD SURVEY ON DOTTED LINES

STAPLE OR TAPE OPEN EDGES

POSTAGE IS PRE-PAID

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 148 COLLEGE STATION, TEXAS 77843

POSTAGE WILL BE PAID BY ADDRESSEE --

PROFESSIONAL DEVELOPMENT PROGRAM
Department of Agricultural Education
College of Agriculture
Texas A&M University
College Station, Texas 77843-2116

SURVIVAL OF THE FITTEST

Problems faced by the beginning vocational agriculture teachers are a concern to administrators, supervisory personnel, and teacher educators in agriculture (Kahler, 1974). These problems are not unique to beginning vocational agriculture instructors.

Problems of the beginning teacher have been topics for discussion dating back to the start of public education. More recently, movies such as The Blackboard Jungle in 1954 and Up the Down Staircase in 1964, depicted the world of the beginning teacher. Books like Don't Smile Until Christmas by Ryan (1970) and The Real World of the Beginning Teacher by Bush (1965) have been written about the first year teacher. Many articles and research papers have been published addressing beginning teachers' problems.

Why so much concern for the beginning teacher? Historically, there has been a high attrition rate for first year teachers. Over fifty percent of those who receive certification upon graduation are not teaching two years later (Bush, 1965). This decision to leave the teaching profession influences several concerned groups. First, the students in the program are affected. They are on the receiving end of the learning experiences provided by the teacher. Second, the continuity of the program is disrupted. Strong programs evolve from the teacher remaining in the same department for more than one year. Third, institutions lose when the beginning teacher drops out of the teaching profession.

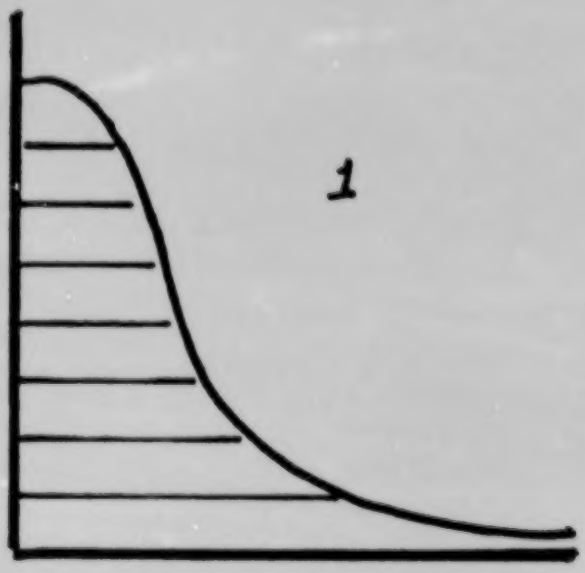
> When teachers leave teaching after only one year, the teacher training institution loses a large investment in unused specialized training. The school system, which has provided a place for "on-the-job" training, loses the benefit of the experienced teacher (Murphy and Priebe, 1974).

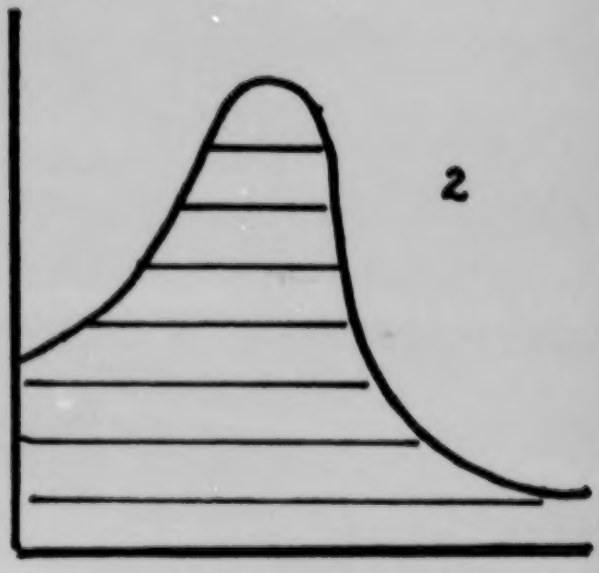
Fourth, the individual teacher is affected. All too often, the idealism of the young individual perishes in the real world of teaching and the teacher must now search for a new career shouldering the stress that is associated with a career change.

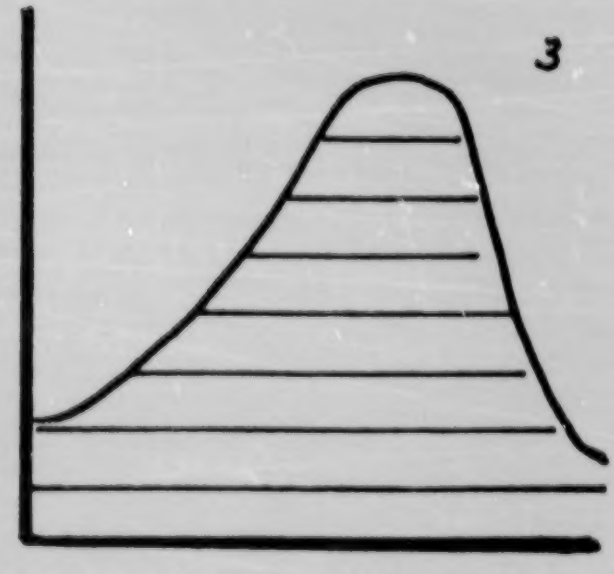
Since the decision to leave is major, why are they choosing that path? As a group, beginning teachers are young people entering a new career with a very tentative professional commitment. Although they have concluded their teacher training program, the majority are quickly and unexpectedly confronted with a variety of issues and frustrating conditions. The successes and failures experienced by the first year vocational agriculture teacher will, to a great extent, influence whether or not that individual chooses to stay in the profession (Kahler, 1974). The inability to cope with these experiences erodes their self confidence. As a result, the individual chooses to leave the teaching profession.

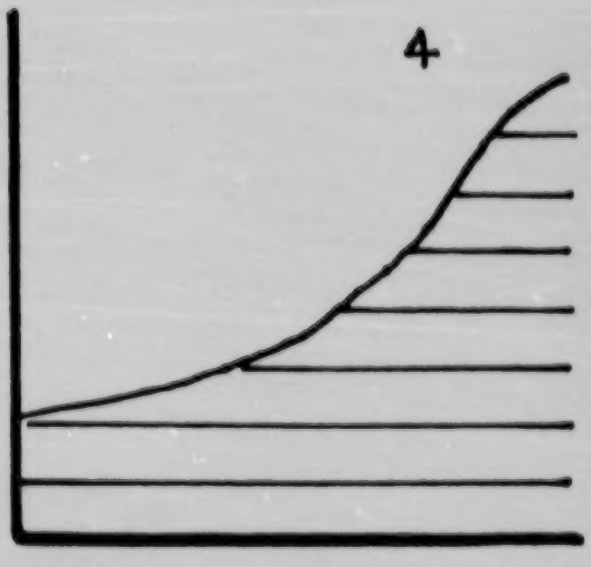
What are the problems encountered by the beginning teacher, which affect their self-esteem? In a workshop conducted for the vocational education teachers of North Dakota (Murphy and Priebe, 1977), participants identified and ranked twenty-seven items or problems of first year teachers.

Table 1. STAGES OF TEACHER CONCERN









The items in rank order are:

1. Inability to establish priorities;
2. Poor management;
3. Idealism versus realism;
4. Poor self-concept;
5. Questionable commitment to teaching;
6.5 Misunderstanding program purposes;
6.5 Inadequate administrative support;
8. Inability to establish realistic learning goals;
9.5 Course of study units too big;
9.5 Lack of teaching resources;
12.5 Lack of administrative support;
12.5 Handling different learning abilities;
12.5 Low local commitment to vocational programs;
12.6 Who to go to for help or if one should;
15. Environment, resources and facilities;
16.5 Lack of state leadership;
16.5 Work much more than teaching;
18. Overpowering vocational requirements;
20.5 No beginners jobs in the teaching profession;
23. Defining the student/teacher role;
25.5 Adjustment;
25.5 Finding a job too quickly;
25.5 Low administrative commitment to professional activities;
25.5 Finding a place to live;

Educators have seen these items or similar items many times, yet these problems still exist for the beginning teacher. Understanding the world of the beginning teacher will help solve these problems. A graph (Table 1) illustrating the stages of teacher concerns developed at the Research and Development Center of the University of Texas explains best the world of the beginning teacher. The graph categorizes teachers' concerns into four different levels or stages: 1. non-teaching, 2. self-concern, 3. task concern, and 4. impact concern.

The non-teaching or unrelated stage is dominant during the teacher training or pre-service program. The individuals are preparing to become teachers, but the problems to be encountered during teaching are not real at this time. The unrelated stage will diminish as the individual graduates and begins looking for a teaching opportunity.

The self-concern or personal stage begins to grow as the individual interviews for a teaching position. Examples of personal concerns are: Where am I going to live?, What salary do I earn?, Should I get married?, etc. At this time the individual is concerned very little with the management of the teaching position or what impact they (the beginning teachers) will have upon the students in their program. After the contract is signed the beginning teacher moves into the task concern stage.

The task concern stage focuses on the day to day management of the teaching position or department. For vocational agriculture instructors, the task stage would include management of day classes, supervised occupational experiences programs, FFA programs, the adult program, and other components of a total vocational agriculture program. This is indeed a major concern for beginning teachers. Many beginning teachers and some experienced teachers never move from the management stage into the fourth stage of growth; impact on students.

Concern for students as individuals is the impact stage. Caring about students is important. Concern for student's gain from the learning experiences provided by the teacher and educational system characterize the fourth stage. It is within the impact stage that teachers find a feeling of accomplishment and experience the successes needed to build one's self worth.

The solution then, to the problem of the beginning teacher is simple; move into the impact stage as soon a possible. The only barrier is getting through the first three levels. If the teacher could be helped through the first three stages, the beginning teacher would be more successful and, as a result would stay in teaching longer.

A glance back to the problems identified by Murphy and Priebe (1977) shows that all the problems could be placed into two levels of concern, the personnel and management stages. It should be noted that not one of the problems identified could be placed into the impact stage. Administrators, supervisory personnel, peer teachers, and teacher educators must assist the beginning teacher to move into the fourth level. Most of this assistance needs to be at the task level.

Various programs have been developed and suggestions made to assist beginning teachers. In Britain, tutors and advisory teams hired by the local schools are used to a assist beginning teachers. All first year teachers are put on probation and must be evaluated by the local education authority in order to attain tenure (Edmunds and Bessai, 1979).

The educational system in the United States has taken a different route. It is the principal's major responsibility to work to improve the abilities of all their teachers. In all too many cases this "help" has been very haphazard. In addition, the principal is seen as an "authority" figure and therefore not likely to be approached by the beginning teacher having problems (Edmunds and Bessai, 1979). Reassessment of the responsibilities of the principal must be a priority. The beginning teacher needs assistance; the principal must provide the major part of that help.

Newberry (1977) concluded that beginning teachers need to find an experienced teacher in the same subject matter area to help survive the first year. Unfortunately this is not always possible especially in the field of vocational education where at many schools only one or two vocational instructors are employed.

Teacher education institutions have initiated programs such as the Beginning Teacher Course in Iowa and the New Teacher Course in Arizona (Zurbrick and McCormick, 1972). These courses are designed to assist the first year teacher of vocational agriculture. The educational value of these programs was rated high by beginning teachers (Townsend, 1980).

Supervisory personnel have long recognized the special needs of the beginning teacher. Visits to first year teachers by state staff personnel have helped, however in many states that support has eroded away. In New Mexico because of limited staff contact, the State Department of Vocational Education funded the development of a handbook for first year vocational agriculture teachers. Vaughn (1978) reported that one-hundred percent of the first year teachers indicated the handbook was extremely helpful.

Many of these programs and suggestions have helped the beginning teacher. More must be done! Suggestions to increase benefits to first year teachers should include:

1. Help individuals in the pre-service program of teacher education understand the real world of the first year teacher. Teaching idealism is great for expansion of thinking; however, without learning realism the stage is set for instant discouragement the first day of class.

2. Provide more "hands-on" activities in local schools with real students. Innovations such as the Early Experience Program in Iowa have supplemented the student teaching program. Teacher educators need to encourage these prospective teachers to get into several different schools during their pre-service program. Perhaps student teaching at two different schools would benefit the beginning teacher.

3. Provide the best role models available for the pre-service program. Individuals tend to teach like they were taught, therefore, the very best teachers should be used, especially in the professional courses.

4. Provide help guides like the New Mexico handbook and show the teachers how to use them. These guides can assist with establishing priorities and help with total program management.

5. Development of curriculum materials that include methodology in addition to subject matter should be a priority.

6. Principals must take a more active role in helping beginning teachers. Include required courses in certification courses that would teach principals how to help their teachers. Also, in-service for principals should be conducted to better prepare them for their major responsiblity.

7. Encourage a "buddy system" among teachers so that the beginning teacher can be helped by a successful experienced teacher.

8. Include simulation experiences within the in-service programs for the beginning teacher to help learn how to cope with the problems that arise.

9. Encourage and expand the beginning teacher programs.

10. Unify support between all persons and institutions concerned with the beginning teacher and attack the problems together.

Beginning teachers of vocational agriculture enter teaching because they like working with people; they like working within the field of agriculture; and they expect to experience a feeling of accomplishment and success (Dickens, 1978). They need assistance in teaching and survival skills; help in learning to identify those items that boost their self-esteem; and opportunity to build their own self-confidence so they can move into the fourth level of concern; concern for the student.

Bush, R.H. 1965. The Formative Years. The Real World of the Beginning Teacher. National Commission of Teacher Education and Professional Standards, National Education Association, Washington, D.C. 7 p.

Dickens, John W. 1978. Why Vocational Agriculture Teachers Enter and Remain in the Teaching Profession. Paper presented to the National Agricultural Education Research Meeting. Dallas, Texas. 13 p.

Edmunds, Edward L. and Fredric Bessai. 1979. First Class. A Survey of Canadian Teachers in their First Year of Service. Faculty of Education, University of Alberta (Canada), Edmond, Alberta. 89pp.

Kahler, Alan A. 1974. Organizational and Instructional Problems of Beginning Teachers of Vocational Agriculture. The Department of Agricultural Education, Iowa State University, Ames, Iowa. 129 pp.

Murphy, Patricia D., and Donald W. Priebe. 1974. A Workshop: The World of the First Year Teacher. Final report. Vocational Education Department, North Dakota State University, Fargo, North Dakota. 33 pp.

Newberry, Janet McIntosh. 1977. The First Year of Experience: Influences on Beginning Teachers. University of British Columbia (Canada), Vancouver, British Columbia. 22 pp.

Peterson, Roland L. 1971. "A First Year Teacher's Course." Agricultural Education Magazine, 43:281.

Research and Development Center for Teacher Education. 1970. Instrument to Measure Growth of Teacher Concerns. Research and Development Center for Teacher Education, University of Texas, Austin, Texas.

Ryan, Kevin. 1970. Don't Smile Until Christmas. University of Chicago Press, Chicago, Illinois. pp. 164-66.

Townsend, Joe D. 1980. "Evaluation of Agricultural Education 511: Instructional and Organizational Problems of Beginning Teachers of Vocational Agriculture." (Unpublished multilithed paper). The Department of Agricultural Education, Iowa State University, Ames, Iowa. 7 pp.

Vaughn, Paul. 1978. Handbook for First Year Vocational Agriculture Teacher. Paper presented to the American Association of Teacher Educators in Agriculture Meeting. Dallas, Texas. 4 pp.

Zurbrick, Phillip R. and Floyd G. McCormick. 1972. In-service Education for the Beginning Teacher. Agricultural Educational Magazine, 45:78-79.

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Professional Development

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Professional Development

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3. Len Steakley	Stephenville	Ag. Ed.-Tarleton
4. Terry McCasland	Wheeler	VAT
5. Joe Martinez	Mission	VAT
6. Gary Adams	Austin Lanier	VAT
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9. Danny Soesbee	McAllen	VAT
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12. Marcel Valdez	Knippa	VAT
13. Patricia Holt	Carlton Center	VAT
14. Thomas Randel	Conroe	Principal
Ex-Officio		
15. Pat Lindley	Austin	TEA
16. Jay Eudy	Austin	TEA
17. Herman Brown	College Station	Ag. Education

THE GRADEBOOK ACCOUNTANT

THE GRADEBOOK ACCOUNTANT
version 1.0
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VOCATIONAL INSTRUCTIONAL SERVICE

June 20, 1985

Gradebook Accountant Program

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Section 1 Program Requirements

Section 2 Before You Start

Section 3 Starting Up

Load TRSDOS 6.0 diskette.
To execute the Gradebook Accountant program, simply type GB. The screen should then clear and display the following message:

Welcome to the

GRADEBOOK ACCOUNTANT PROGRAM

version 1.00

VOCATIONAL INSTRUCTIONAL SERVICE

This program creates and maintains
an organized class roster containing
a record of each student's attendance
and grades.

Enter name of class file:

Section 4 Initializing A Class File

At the bottom of the title screen will appear a prompt asking for the name of the class file that you wish to work with.

Enter name of class file:

The response should be an appropriately named label of eight or less characters in length. This label will serve as the name of the data files that will contain all of the class data for an individual class.

To start a new class file, just enter the name that you wish it to be located under. The filename must be unique and should be mnemonic, if possible. After entering the name and pressing ENTER, the following message should be displayed.

File not found. Create it (Y/N)?

If you had entered the name of an existing file and this message is displayed, then check to see if the filename was misspelled or if the file is located on another diskette. If you do wish to create a new class file, then just press Y for yes. The screen should clear and display the definition menu. The define Student Grade Card allows the user (you) to define the parameters (limits) of each grade category on the grade sheet. It predefines three grade categories as HOMEWORK, QUIZZES, and TESTS. It also makes available three more categories to be individually defined for each class. (Other categories such as labs, programs, final exams, mid-term exams, et cetera.)

GRADEBOOK ACCOUNTANT VERSION 1.00

DEFINE STUDENT GRADE CARD

1. Enter # hmwk, quizzes & tests
2. Define extra category 1
3. Define extra category 2
4. Define extra category 3
5. Return to MAIN MENU

- -

	FIELD NAME	SLOTS ALLOTTED
1.	HOMEWORK	10
2.	QUIZZES	8
3.	TESTS	4
4.	EXPERIMENT	8
5.	UNDEFINED	0
6.	UNDEFINED	0

Three unassigned categories are available for redefinition. To redefine one to your specific needs, choose 2, 3, or 4. The bottom half of the screen will then clear and display the following:

Enter new field name:

Enter number of slots:

Press CTRL P when finished

The field name can be up to 10 characters in length, with up to 100 slots defined. Pressing enter will move the cursor from one entry to another, with CTRL P returning you to the top menu.

Once the gradesheet has been defined to your satisfaction, and you wish to advance to other phases of gradebook data entry, just press 5. The following query will be displayed:

Is everything correct (Y/N)?

The answer N (for no) will return you to the Define Grade Card Menu. The answer Y (for yes) will result in the next message being displayed onto the screen:

Enter password (1-10 characters):

- -

A Note On Passwords

The password is your protection from unauthorized access to your grade sheets. Some simple precautions should be followed to insure its reliability.

Never use as a password the name of the class or filename.

Never use your first or last name.

Use a name that you will remember, like a date, a parent's name, or name of a pet, etc. Do not write the name down anywhere that it can be found by an unauthorized person.

Don't tell anyone else your password.

- -

Please note the preceding hints about passwords. To violate any one of them is simply rendering the password useless as a means of protecting your data.

To make a selection from the menu, move the arrow to the appropriate option and press enter. To move the arrow, either press CTRL E to move upward, or CTRL X to move downward through the menu. The space bar will also move the arrow downward. Entry of the appropriate numeric label (in this case a number between 1 and 5) will also result in the selection of the desired option.

The lower half of the screen displays the current state of the grade sheet for that particular class. An important item to remember is that once a particular gradebook file has been initialized under this menu and the user has exited this menu, the parameters cannot be changed. If you are not sure of exactly how many tests, quizzes, or homework assignments you will assign and grade for that particular class then make an estimate on the greatest number of assignments that you could reasonably expect to make. Later in the process you can make the number smaller, but it can not be expanded.

To redefine the number of assignments of homework, quizzes, and/or tests, simply press 1 or select the first entry on the menu. The screen should then look like this:

```
GRADEBOOK ACCOUNTANT   VERSION 1.00

     DEFINE STUDENT GRADE CARD

  1.  Enter # hmwk, quizzes & tests
  2.  Define extra category 1
  3.  Define extra category 2
  4.  Define extra category 3
  5.  Return to MAIN MENU

- - - - - - - - - - - - - - - - - - - - - - - - - - -
     CATEGORY CHANGE              CURRENT SIZE

  1.  Change # of homework slots        0
  2.  Change # of quiz slots            0
  3.  Change # of test slots            0
  4.  Return to ABOVE MENU

     MAKE A SELECTION PLEASE

Enter # of slots for HOMEWORK:  100
```

After you have selected the category that you wish to define, in this case homework, the program should then prompt you for the number of slots you wish to make available in the gradebook. Remember it is better to overestimate than to underestimate the number of entries. No more than 100 slots can be defined for any of these categories. Hopefully, more will not be needed. Once you are finished, select option 4 to return you to the top menu.

After entering an appropriate password, the screen will then clear and display the following message.

Please wait. . .Loading in gradebook layout. .

Enter password:

This is also the message you will encounter when accessing a previously defined file at the beginning of this lesson. Entry of the password ensures that you are the proper user for a particular file. If you enter an incorrect password, the screen will respond with the message

ILLEGAL PASSWORD

and will return you to the system. Entering the correct password will result with the screen clearing again and displaying the following menu, called the Main Menu:

GRADEBOOK ACCOUNTANT VERSION 1.00

MAIN MENU

1. Add a student record
2. Delete student record
3. Modify student record
4. Enter or change grades
5. Enter grade weights
6. Display grades
7. Review class roster
8. Change class
9. Exit program

MAKE A SELECTION PLEASE

CTRL E - UP CTRL X - DOWN ESC - LAST

Pressing CTRL E will move the cursor arrow up the menu. If the arrow is currently located at number 1, the next CTRL E will move the arrow to the last entry, number 9. Likewise, CTRL X moves the arrow cursor down the menu. The space bar also serves the same purpose. Entering the number of the entry of your choice will move the cursor immediately to that entry. Pressing ESC places the cursor at the last entry, number 9 and allows you to exit.

Section 5 Entering Student Information

If you choose to enter students into the gradebook, choose number 1. The following screen will then appear on the screen.

```
                    GRADEBOOK ACCOUNTANT   VERSION 1.00

ADDING STUDENT(S) MODE:

STUDENT ID #    :
CLASSIFICATION  :
FIRST NAME      :
MIDDLE INITIAL  :
LAST NAME       :
DAYS ABSENT     :

COMMANDS:  CTRL E - UP     CTRL X - DOWN     CTRL O - ABORT     CTRL P - SAVE
```

As before, CTRL E and CTRL X function as previously described, moving the cursor up and down, respectively. CTRL O allows you to abort the current entry and start all over with a clean slate. CTRL P saves the current entry into the database for the class.

The student identification number can be from 1 - 13 alphanumeric characters in length. This allows for the entry of a student's social security number, among other things. An identification number must be entered, along with a last name, and must be unique for each student in the class file.

Classification is a two alphanumeric character field which can contain the student's grade classification, such as senior, freshman, kindergartner, etc. It is not required, but is present for information clarity.

The first name is also not required, but is helpful for student identification. It can be up to 15 characters in length.

The middle initial is only one character in length and is not necessary for entry into the file.

Last names must be entered for each student into the class file, and it can be up to 15 characters in length. Last names, by necessity, are not required to be unique, owing the impossibility of that requirement.

Days absent is a field where the number of days absent by the pupil is entered into the file. It can be from 0 - 99.

After all student information is entered satisfactorily into the student data sheet, press CTRL P to save to the disk file. CTRL O will abort a student data sheet. Upon pressing CTRL P the following message will appear on the screen:

Adding student!

If both the last name of the student and the identification number is missing from the information sheet, the program will prompt you with the message:

```
Student last name and ID # omitted
Correct problem or abort (CTRL O) edit
```

If only the last name was left off, the screen will display the following prompt:

```
You must enter the student's last name
Correct problem or abort (CTRL O) edit
```

The program will then return you to the student file so that you can remedy the situation, if you so desire. If instead, you wish to abort the current student information sheet, simply press CTRL O.

If the student identification number is not unique, meaning that there is another student in that class who shares that number, the program will respond with the prompt:

```
Student ID # already exists!
Re-edit student record (Y/N)?
```

Answering Y for yes will return you into edit mode as before, whereas answering N for no will abort that student record without saving it to disk.

After the student file has been entered into the class database, the following message will be displayed:

```
Add another student (Y/N)?
```

Answering Y (for yes) will clear the screen and redisplay the Adding Student(s) Mode screen. Answering N (for no) will return you to the Main Menu.

Section 6 Deleting A Student

If, for some reason, you wish to delete a particular student from the class database, choose number 2 on the Main Menu screen. The following will then appear:

GRADEBOOK ACCOUNTANT VERSION 1.00

DELETE STUDENT MODE:

Enter student ID #:

If an incorrect or nonexistent identification number is entered, then the response will be:

Student ID # not found.

Otherwise the screen will then display the pertinent student identification that has been entered. An example follows.

GRADEBOOK ACCOUNTANT VERSION 1.00

DELETE STUDENT MODE:

```
STUDENT ID #    : 999-99-9999
CLASSIFICATION  : 99
FIRST NAME      : ZAPHOD
MIDDLE INITIAL  :
LAST NAME       : BEEBLEBROX
DAYS ABSENT     : 99
```

Delete it (Y/N)?

To answer Y (for yes) will then result in the deletion of this particular file from the class database whereas the answer N (for no) will simply continue on with no change to the class database. The following question will then appear:

Delete another student (Y/N)?

The answer Y will restart the Delete Student Mode. The answer N will return you to the Main Menu.

Section 7 Modifying A Student Information File

If, after entering a student into the class data base, you realize that a mistake has been made somewhere in the entry of student information or that the number of days absent must be changed, modifications to the sheet can be made by choosing number 3 on the Main Menu.

Upon choosing number 3, the screen will clear and display the following:

GRADEBOOK ACCOUNTANT VERSION 1.00

MODIFY STUDENT MODE:

Enter student ID #:

If the student identification number is entered incorrectly or cannot be found in the class database, this next message will be displayed underneath the ID number that you had entered.

Student ID # not found.

Else the screen should display the pertinent student information as follows:

```
STUDENT ID #    :  000-00-0000
CLASSIFICATION  :  45
FIRST NAME      :  LAZARUS
MIDDLE INITIAL  :  A
LAST NAME       :  LONG
DAYS ABSENT     :  0
```

COMMANDS: CRTL E - UP CTRL X - DOWN CTRL O - ABORT CTRL P - SAVE

As described before in this manual, CTRL E moves the cursor up the screen, CTRL X moves the cursor down the screen, and CTRL O will abort the current version of the student sheet without modifying the class database. After all modifications have been made, pressing CTRL P will save the newly modified version of the student information sheet into the class database and will print onto the screen the following message:

Updating student record.

It will be followed by the message:

Modify another student record (Y/N)?

If you wish to continue modifying other student records, press Y for yes, other wise press N to return you to the Main Menu.

Section 8 Entering or Changing Student Grades

To begin entering grades or modifying grades where needed, select Option 4 on the Main Menu. The screen should then clear and display the following menu:

GRADEBOOK ACCOUNTANT VERSION 1.00

GRADE ENTRY/CHANGE MENU

1. Enter/change a grade for class
2. Enter/change one student's grades
3. Return to MAIN MENU

MAKE A SELECTION PLEASE

CTRL E - UP CTRL X - DOWN ESC - LAST

Pressing CTRL E moves the cursor upward, pressing CTRL X moves the cursor downward, and pressing ESC moves the cursor to Option 3.

Option 1 allows you to enter a single grade in one category for the entire class. It will list the students in the order that they are found in the database. If you have previously reviewed the class roster and had the class list sorted by either name or identification number, then this will be the order that the file will now be displayed in. If you haven't yet done this, you may find it helpful to exit this menu and select Option 7 from the Main Menu and sort the file. This may make it easier to enter each student's grades.

By selecting Option 1 on the Grade Entry/Change Menu, the following screen will be displayed:

GRADE ENTRY/CHANGE MENU

1. Enter/change a grade for class
2. Enter/change one student's grades
3. Return to MAIN MENU

MAKE A SELECTION PLEASE

	FIELD NAME	SLOTS ALLOWED
1.	HOMEWORK	10
2.	QUIZZES	8
3.	TESTS	4
4.	EXPERIMENT	8
5.	UNDEFINED	0
6.	UNDEFINED	0
7.	Return to GRADE MENU	

ENTER OR CHANGE GRADE IN WHICH CATEGORY?

of a menu option. When you have selected the category that you wish to enter a grade under, press enter. The following message will then be displayed:

Enter column #:

Column number is the number of the assignment that you wish to enter a grade under. Remember when you entered the delimiter values for each category field in the Define Grade Card Menu. The values you had entered there are the maximum value of each column. If you wish to enter the grades for the first homework assignment, simply select HOMEWORK, press ENTER, then enter the number 1. The screen should clear and display the grade card for the first student, like this:

```
GRADES MODE:

STUDENT ID #    :  999-99-9999
CLASSIFICATION  :  99
FIRST NAME      :  ZAPHOD
MIDDLE INITIAL  :
LAST NAME       :  BEEBLEBROX
DAYS ABSENT     :  99

CATEGORY          1   2   3   4   5   6   7   8   9   10  11  12  13

- - - - -        --  --  --  --  --  --  --  --  --  --  --- --- ---

HOMEWORK        : 0   0   0   0   0   0   0   0   0   0
QUIZZES         : 0   0   0   0   0   0   0   0
TESTS           : 0   0   0   0
EXPERIMENT      : 0   0   0   0   0   0   0   0
                :
                :

COMMANDS:  CTRL E - UP      CTRL S - LEFT    CTRL O - ABORT   ESC - RE-EDIT
           CTRL X - DOWN    CTRL D - RIGHT   CTRL P - SAVE
```

The digits displayed are the initial values in this particular student's grade card. Obviously this grade card has been defined to have a maximum of 10 homework assignments, 8 quizzes, 4 tests, and 8 experiments. Now, if later on you decide that you will only assign and grade 8 homework assignments, thir can be allowed for. This grade sheet will not be changed. To allow for only 8 homework assignments to count, simply enter into the Grade Weights Total Points section the total allowable points for 8 homework assignments.

The value of each grade assigned cannot be less than 0 or greater than 100.

When finished entering the particular grade for this student, simply press CTRL P to save the class database file. The screen should then show a message:

```
Updating record.
Next student (Y/N)?
```

Entering Y for yes will allow you to proceed onward to the next student in the database. Pressing N for no will abort the class grade-entering procedure and return you to the Grade Entry/Change Menu.

If you wish to enter or modify only one student's grades, select Option 2 from the Grade Entry/Change Menu. This will result with the following message being displayed:

```
                    GRADE ENTRY/CHANGE MENU

                1.  Enter/change a grade for class
                2.  Enter/change one student's grades
                3.  Return to MAIN MENU

                      Enter student ID #:

            CTRL E - UP     CTRL X - DOWN      ESC - LAST
```

If an incorrect ID number is entered, the following is displayed:

```
                    Student ID # not found.
```

Else the screen will clear and the individual student's grade card will be displayed on the screen, as follows:

```
GRADES MODE:

STUDENT ID #    :  999-99-9999
CLASSIFICATION  :  99
FIRST NAME      :  ZAPHOD
MIDDLE INITIAL  :
LAST NAME       :  BEEBLEBROX
DAYS ABSENT     :  99

CATEGORY:          1   2   3   4   5   6   7   8   9   10   11   12   13

- - - - -         --  --  --  --  --  --  --  --  --  --   --   --   --

HOMEWORK        : 0   0   0   0   0   0   0   0   0   0
QUIZZES         : 0   0   0   0   0   0   0   0
TESTS           : 0   0   0   0
EXPERIMENTS     : 0   0   0   0   0   0   0   0
                :
                :

COMMANDS:  CTRL E - UP      CTRL S - LEFT      CTRL O - ABORT
           CTRL X - DOWN    CTRL D - RIGHT     CTRL P - SAVE
```

You can move through the grade card using the control characters: CTRL E for moving up, CTRL S for moving downward, CTRL S for moving left one position, and CTRL D for moving right one position. CTRL O allows you to exit the displayed student's grade card without updating the file, in case a mistake was made. CTRL P saves the changed student grade card to the class database. The program will display the message:

Updating record

and, when finished, will return you to the Grade Entry/Change Menu.

Section 9 Assigning Grade Weights

Selecting Option 9 from the Main Menu allows you to assign grade weights and total accumulated value for each grade category. When selected, the screen will clear and display the following menu:

GRADEBOOK ACCOUNTANT VERSION 1.00

GRADE WEIGHTS MENU

1. Enter total points for grade category
2. Enter grade weights
3. Return to MAIN MENU

Option 1 allows you to specify the total number of points each category is worth. This is generally done by multiplying the number of actual assignments graded by 100. If you had defined the class as having 8 quizzes and later decided only to give 7, instead of redefining the affected data field (which would be very difficult), you can just change the total allowable points to 700 from 800. Of course, points do not have to be based on 100 points. If this is the case, then just add up the total allowable number points and enter that value into the appropriate field. Remember, though points do not have to be based on 100 points, a single assignment cannot be worth more than 100 points.

If Option 1 is selected the following is displayed on the screen:

GRADEBOOK ACCOUNTANT VERSION 1.00

	FIELD NAME	MAX POINTS
1.	ATTENDANCE	0
2.	HOMEWORK	0
3.	QUIZZES	0
4.	TESTS	0
5.	EXPERIMENT	0
6.	UNDEFINED	0
7.	UNDEFINED	0
8.	RETURN TO MAIN MENU	
	TOTAL POINTS	0

To assign points to tne homework field, simply position the cursor to point at the homework field (as shown above), and press ENTER. The response will be:

Enter point total:

The upper limit for each field is 10000 points. No more than that can be assigned to each field. If an attempt is made, accidently or on purpose to enter a number greater than 10000, the following prompt will appear:

INPUT RANGE: 0 TO 10000

You may have noticed that Attendance is also a field that you may assign a value to. This value should be the total number of days in the grading period in question, or a number related to this value. This allows for the assignment of a small portion of the grade to be assigned based on the student's attendance.

As each field is given a value, the bottom field, called TOTAL POINTS is incremented by the same value. When you are finished entering total category point values, simply select Option 8 to return to the Grade Weights Menu.

Selecting Option 2 under the Grade Weights Menu allows you to set the appropriate percentage of the grade that each category will make up. The following screen will then be displayed:

GRADEBOOK ACCOUNTANT VERSION 1.00

	FIELD NAME	PERCENTAGE
1.	ATTENDANCE	0 %
2.	HOMEWORK	0 %
3.	QUIZZES	0 %
4.	TESTS	0 %
5.	EXPERIMENT	0 %
6.	UNDEFINED	0 %
7.	UNDEFINED	0 %
8.	RETURN TO MAIN MENU	
	TOTAL PERCENTAGE	0 %

As you enter the percentage values for each category, the TOTAL PERCENTAGE field will increment by that same value. The program will allow you to enter any percentage that you desire, but upon leaving it must equal 100%. If you attempt to exit while the value is greater than 100%, the following prompt will be displayed:

Total percentage must add up to 100%

Option 3 returns you to the Main Menu.

Section 10 Reviewing and Printing Grades

Option 6 on the Main Menu is the grade review menu, which allows you to review, via the computer screen or printer, the grades of an individual student or those of the class. Selection of this option results in the following screen to be displayed:

```
                GRADEBOOK ACCOUNTANT   VERSION 1.00

                    GRADE INFORMATION MENU

                        1.  Review a student's grade
                        2.  Review class grades
                        3.  Print a student's grade
                        4.  Print all grades
                        5.  Return to MAIN MENU

                        MAKE A SELECTION PLEASE

                CTRL E - UP     CTRL X - DOWN      ESC - LAST
```

Use of the control keys allows you to move up (CTRL E) or down (CTRL X) the menu. Pressing ENTER selects the option you wish to perform. Pressing ESC selects the fifth option, which returns you to the main menu.

Option 1 on the Grade Information Menu allows you to display an individual student's grade summary. This looks like the following:

```
                GRADEBOOK ACCOUNTANT   VERSION 1.00

STUDENT ID #    : 999-99-9999
CLASSIFICATION  : 99
FIRST NAME      : ZAPHOD
MIDDLE INITIAL  :
LAST NAME       : BEEBLEBROX
DAYS ABSENT     : 99

                POINTS          POSSIBLE        GRADE           GRADE
                EARNED          POINTS          WEIGHTS         POINTS
                - - - -         - - - - -       - - - -         - - - -
ATTENDANCE:        99             100              5             0.1
HOMEWORK   :    10000           10000             10            10.0
QUIZZES    :    10000           10000             20            20.0
TESTS      :    10000           10000             25            25.0
EXPERIMENT:     10000           10000             40            40.0
           :        0               0              0             0.0
           :        0               0              0             0.0

FINAL GRADE - - - - - - - - - - - - - - - - - - - - - - - - - - - - -  95.1
Press any key to continue.
```

All student information is located at the top of the screen, including number of days the student has been reported absent. This value also appears under the grade information summary. POINTS EARNED are the actual total points the student has earned under each category. POSSIBLE POINTS are the total allowable points for each category as entered in Option 4 under the Main Menu. GRADE WEIGHTS are the percentages that each category is assigned as entered in Option 4 under the Main Menu. GRADE POINTS are the comparable percentage of points earned by the student. Each category is represented. At the bottom of the screen, the FINAL GRADE is the accumulated total of the percentage points earned by the student. Once you are finished reviewing this student's grade summary sheet, press any key to return to the Grade Information Menu.

Option 2 allows you to display a cumulative percentage points earned by each student. This is displayed on a roster list. When Option 2 is selected, the screen will first display the message:

Computing grades. . .

with each identification number flashing by as it computes each grade.

After the program finishes computing the grades, the screen will clear and display the class roster containing the identification number, the last name of the student and his/her grade for the class. This looks like the following example:

STUDENT ID #	STUDENT NAME	AVERAGE
000-00-0000	LONG	100.0
123-45-6789	SMITH	90.0
999-99-9999	BEEDLEBROX	95.1

COMMANDS: CTRL E - UP CTRL X - DOWN ESC - RETURN TO MENU

Options 4 and 5 allow you to print out onto a printer a duplicate of what you see on the screen in Options 1 and 2, respectively. Be sure that the printer is on, is properly set up, and has an adequate supply of paper. Any necessary system commands should have already been run before entering the gradebook program. Neglecting any one of these can result in this program failing due to system error. If you have tried to print a class roster without checking to see that the printer is on, the program will probably come back with the message:

Set up printer and press any key to print.

The system may or may not recover. You may have to reboot the system. Hopefully your files have not been damaged, but that cannot be guaranteed under such circumstances.

Section II Displaying the Class Roster

To view the class roster of student identification numbers and last names, choose Option 7 on the Main Menu. This will result in the screen clearing and displaying the following new menu:

```
                GRADEBOOK ACCOUNTANT   VERSION 1.00

                    REVIEW STUDENT ROSTER

                    1.  Sort roster by NAME
                    2.  Sort roster by ID
                    3.  List roster to screen
                    4.  List student roster to printer
                    5.  Return to MAIN MENU

                    MAKE A SELECTION PLEASE

            CTRL E - UP      CTRL X - DOWN      ESC - LAST
```

As before, CTRL E moves the cursor up, CTRL X moves the cursor down, and ESC moves the cursor to Option 5. The class roster can be sorted by last name or by identification number, whichever the user prefers. Selecting Option 1 will sort the class file by last name and Option 2 will sort by identification number. Choosing either one of these options will result in this message being displayed onto the screen.

```
                    Sorting students . . .
```

When finished, the message will then read:

```
                    Sorting students . . . Done!!
```

Selecting Option 3 will clear the screen then show the following:

```
                GRADEBOOK ACCOUNTANT   VERSION 1.00

STUDENT ID #                    STUDENT NAME
- - - - - - -                  - - - - - - -
999-99-9999                     BEEBLEBROX
000-00-0000                     LONG
123-45-6789                     SMITH

COMMANDS:  CTRL E - PREVIOUS STUDENT      CTRL X - NEXT STUDENT
           ESC    - RETURN TO MENU
```

The student identification numbers should be located underneath the STUDENT ID # heading, and the last name of the student should be under the STUDENT NAME heading. If more than 18 students are in the class, the screen will scroll using the CTRL E to move the screen to display a preceding student at the top of the screen, meanwhile moving the list of students on the screen one position downward. CTRL X will display the next student at the bottom of the screen, meanwhile moving the list of students on the screen one position upward. When finished viewing the class roster list, press ESC and you will be returned to the Review Student Roster menu.

Option 4 under the Review Student Roster menu allows you to print out the class roster onto paper as it appears under Option 3. Make sure you check to see that the printer is on, that it has an adequate supply of paper, and that all controls have been set. Any system commands needed to prepare the printer for correct printing should have been run before running this gradebook program. This program can do many things, but it cannot recover from oversights made by you, the user. If you have tried to print a class roster without checking to see that the printer is on, the program will probably come back with the message:

Set up printer and press any key to print.

The system will not recover, and you may have to reboot the system. Your files should not have been damaged, but that cannot be guaranteed under such circumstances.

Section 12 Changing Classes

Once you have finished entering, modifying, or otherwise changing one class database file, you may wish to continue on with another class database file. Option 8 on the Main Menu allows you to do just that. When selected, the program will respond by asking for the name of the next class file that you wish to enter, as shown below:

GRADEBOOK ACCOUNTANT VERSION 1.00

MAIN MENU

1. Add a student record
2. Delete student record
3. Modify student record
4. Enter or change grades
5. Enter grade weights
6. Display grades
7. Review class roster
8. Change class
9. Exit program

MAKE A SELECTION PLEASE

CTRL E - UP CTRL X - DOWN ESC - LAST

Enter name of class file:

Enter the appropriate name of the class file that you wish to enter. If the class file does not yet exist and you wish to create one, simply enter an appropriate name and the program will respond as it did in Section 4, the Define Grade Card Menu.

Section 13 Exiting the Program

Pressing ESC, the number 9, or moving the cursor to the position opposite the ninth entry in the main menu will allow you, the user, to exit the program. Upon selecting this option, the screen will look like this:

GRADEBOOK ACCOUNTANT VERSION 1.00

MAIN MENU

1. Add a student record
2. Delete student record
3. Modify student record
4. Enter or change grades
5. Enter grade weights
6. Display grades
7. Review class roster
8. Change class
9. Exit program

Exit program (Y/N)?

CTRL E - UP CTRL X - DOWN ESC - LAST

If you had hit the exit option by accident, answering N for no will return you to the Main Menu automatically. By answering Y for yes, you will then be returned to the system. All class information will have previously been saved into files.

LAND JUDGING PREPARATION

Land Judging Preparation

Overview

The **Land Judging Preparation** program drills a student on the information that is needed to prepare for the Soils Judging competition of the FFA. It includes both a testing and an information presentation section.

Program Setup

To set this program up, copy the file named **LAND.EXE** onto a diskette that contains a bootable system. There are no secondary files needed for this program to operate. The program also does not create any additional files while it runs.

Program Operation

The program is executed by typing the command **LAND** at the operating system prompt. A title screen is then displayed until the user types a character from the keyboard.

The next screen that is displayed is the **Main Menu**. This is the screen that controls entry to the two sections of the program, allowing one to go back and forth at any time between those sections. The options on that screen are:

1 - Judging Information

2 - Quiz

0 - Quit

Judging Information

The **Judging Information** section is the one that presents the information that the student needs. At any time during this section the student has three available options. These options are **Next**, **Previous**, and **Escape**. **Next** will cause the next screenful of information to be presented. This option is invoked by pressing the letter N on the keyboard. By pressing the letter P on the keyboard, the student will be able to view the previous screen of information. Pressing the **Escape** key on the keyboard returns the student to the **Main Menu**.

Quiz

The **Quiz** section presents terms from the **Judging Information** section. The quiz is structured as a multiple choice type, all of the answers correspond to valid answers for terms in that related group of terms.

After a question has been answered, the student is informed if his/her answer was correct. The score is then displayed at the bottom of the screen, giving the number of questions attempted, the number answered correctly, and the percentage correct.

Quit

This will exit the program and return the user to the operation system.

Plant Evaluation

Overview

The **Plant Evaluation** program drills a student on the information that is needed to become familiar with the plants that are common, found in Texas. It includes quizzes on four plant groups, as well as the capability to display or print a listing of the plants in the program.

Program Setup

To set this program up, copy the file named **PLANTS.EXE** onto a diskette that contains a bootable system. There are no secondary files needed for this program to operate. The program also does not create any additional files while it runs.

Program Operation

The program is executed by typing the command **PLANTS** at the operating system prompt. A title screen is then displayed until the user types a character from the keyboard.

The next screen that is displayed is the **Main Menu**. This is the screen that controls entry to the various sections of the program, allowing one to go back and forth at any time between those sections. The options on that screen are:

1 - Grasses
2 - Legumes
3 - Forbs
4 - Woody Plants

S - Show a listing of the Plants
P - Print a listing of the Plants

0 - Quit

Grasses, Legumes, Forbs, and Woody Plants

These sections correspond to the various plant groups that are stored in this program. Each group is quizzed seperately. The format of the interaction with the user is identical for each section.

The display will have the category selected at the top of the screen as well as the common and latin names of the plant that the user is asked to characterize. The user must characterize the plant in five categories: the life cycle of the plant, its growing season, its origin, reaction to abuse, and grazing value:

The life cycle of the plant can be either perennial or annual.

The season may be either cold or warm.

The origin may be either native or introduced.

The reaction to abuse may be a decreaser, increaser, or invader.

The grazing value may be either good, fair, or poor.

To make selections, the user may press any non-space key in the column that corresponds to his/her choice, or may use the space key to skip a certain column or to erase an erroneous choice. When the user has made a selection in a category, the cursor skips to the next category automatically. When the user has completed his/her answer, the enter key is pressed. The selection is then graded as to its correctness. If the selection is incorrect, the user is given a second chance to answer before the correct answer is given.

At any time the user may press the escape key to return to the main menu and skip the current question.

Show/Print a Listing of the Plants

This selection will display on the screen or print on the printer the plants that are stored in this program. The information is printed and displayed in a format that corresponds to the format used during the quiz section. The listing could be used for review purposes while the user was away from the computer.

Quit

205 DAY ADJUSTED WEANING WEIGHT
AND PERFORMANCE EVALUATION

THE TEXAS AGRICULTURAL EXPERIMENT STATION
THE TEXAS AGRICULTURAL EXTENSION SERVICE
THE TEXAS A&M UNIVERSITY SYSTEM

205 DAY ADJUSTED WEANING WEIGHT AND PERFORMANCE EVALUATION

USER'S MANUAL

AUTHORS: DR. JAMES M. MCGRANN
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PROGRAMMER: ROBERT ALAN DAVIS

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I. OBJECTIVE

The purpose of this program is to calculate the adjusted 205 day weaning weights and weight ratios for a group of calves and allow the user to sort the calves by sire, sex, and dam.

The user initially sets up the cow age adjustment factors and birth weight adjustment factors (if birth weights are unknown) in permanent storage. Data on a contemporary group of calves or calves from a similar environment are then entered by the user and stored. The program does the necessary calculations and ranks the calves from highest to lowest ratio. The calves are then sorted by sire, sex, and dam. Data for a group of calves can be placed on a separate disk to facilitate storage for future analysis.

The adjustment procedure used in this analysis follows the beef improvement federation recommendations.

Instructions are presented below that guide the use of the program.

II. INSTRUCTIONS

Answer the questions as they are displayed on the screen. When entering a value, enter it and press the "RETURN" key. If an invalid response is detected by the computer, an error message will appear with the question at which time you will reenter the response.

Do not enter percentages as decimals. That is, don't enter a number like ".50" as ".5". Enter "50%" as "50". The computer will do this conversion should it be necessary.

Enter all dates in the format of "MM.DD.YY". Since many machines have a decimal point (".") on the numeric pad on the keyboard, this format should make entering the dates more convenient.

To get to the exit routine press "!". This can be done at any time during the course of the program. A list of options will appear on the screen that will allow you to exit the program, start the program again, return to where you previously were, review the objectives, review the instructions, or see this user's manual. Choose one of these options and press the "RETURN" key.

Be sure and align the paper in the printer to the top of the page. Failure to do this will cause the printing to cross the perforation on the paper.

III. INPUTS (EXECUTION OF THE PROGRAM)

Below is the basic program Menu of activities that the program will actually execute.

MENU

1 . . . . . INPUT CALF DATA
2 . . . . . UPDATE EXISTING CALF DATA
3 . . . . . OUTPUT CALF DATA
4 . . . . . INITIALIZE BIRTH WEIGHTS
5 . . . . . INITIALIZE ADJUSTMENT FACTORS
6 . . . . . SEE AVAILABLE GROUPS
7 . . . . . EXIT PROGRAM

SELECT OPTION:

_____ If option "1" is chosen, the program will go to the "INPUT ROUTINE" (see "A" below). This routine allows the user to input new calf data and store it on the disk.

_____ If option "2" is chosen, the program will go to the "UPDATE ROUTINE" (see "B" below). This routine allows the user to update calf data that has previously been input and stored on the disk.

If option "4" is chosen, the program will go to the "OUTPUT ROUTINE" (see "C" below). This routine allows the user to output the particular calf data in printed report form.

If option "5" is chosen, the program will go to the routine that initializes the birth weights (see "D" below) that are used when the calf data is input or updated when the actual birth weights are unknown.

If option "6" is chosen, the program will go to the routine that initializes the adjustment factors (see "E" below). These adjustment factors are used in calculating the adjusted weaning weights of the calves.

If option "7" is chosen, the program will go to the routine that will show the available groups on a particular disk (see "F" below).

If option "8" is chosen, the program will go to the exit routine of the program. At this point, the user may end the program, start the program again, return to the above menu, review the objectives, review the instructions, or see this user's manual.

A. Input Routine.

This routine allows the creation of a new group of calves or the addition to an existing group of calves. When the program control is transferred to this point, the following initial questions are asked:

"What is the number of the contemporary group of calves which you are going to be working with?" (Note--this number may be up to 4 digits long.)

"What drive will you be using? ("A" or "B")

If the group that you are going to be working with already exists, then the next two questions will be asked. Otherwise, they will be skipped.

"Would you like a list of the calves now in this group?" (Y/N)

If you respond "NO" to this question, then the list of calves will not be printed and questions to input the new calf data will be asked.

If you respond "YES", then the following will be asked:

"Do you want the list printed on the printer?"

At this time, the list of calves currently in the group will be printed either on the screen or the printer depending on the response to the last question.

From the following questions you will be asked to input the new calf data:

"What is the calf identification number?" (Note--this number may be up to 6 digits long)

"What is the dam identification number?" (Note--this number may be up to 6 digits long)

"What is the birth date of the calf?" (MM.DD.YY)

"What is the sex of this calf?
1 . . . . . BULL
2 . . . . . STEER
3 . . . . . HEIFER

SELECT OPTION "

"What is the birth weight of the calf?" (If the birth weight is unknown, press "RETURN" and a stored birth weight will be used.)
***(Note--if the birth weights have not been initialized and a "RETURN" has been pushed, control will be passed to the initialization of the birth weights routine. See "D" below.)

"What is the age of the dam?" (In years)

"What is the sire identification number?" (Note--this number may be up to 6 digits long)

"What is the weaning date of the calf?" (MM.DD.YY)

"What is the actual weaning weight?"

***Note--when inputing data, you may simply press "RETURN" to input a value that was used for the previous calf entered. For example, if a number of calves had the same weaning date, then to keep from having to reenter that date for each calf, you may press "RETURN" and the weaning date from the previously entered calf will be used. This feature can be used on all questions except the calf identification number and the calf birth weight. Also, this feature will not work on the first calf entered.

At this point, a list of the previous inputs will be displayed. You may change any of the items by typing the number of the item to be changed. That question will then be asked and a new answer may be entered. This may be done until you are satisfied with the data. When you are satisfied with the input data, simply press "RETURN" and the program will continue.

When only the "RETURN" key is pressed, the adjusted weights are calculated and the calf data is filed. The following question will then be asked:

"Do you want to enter another calf in this group?" (Y/N)

If you respond with "YES", then the questions for inputing another calf will be asked.

If you respond with "NO", the following questions will be asked:

"Would you like a list of the calves now in this group?" (Y/N)

If you respond with "NO", then the following question will not be asked and the list will not be printed:

"Do you want the list printed on the printer?"

The list will now be printed and the next question will be asked.

"Do you want to make any changes to the calves in this group?" (Y/N)

If you respond with "YES", you will then be allowed to modify (change or delete) any of the the calves in this group. (See Update Routine B)

If you respond with "NO", the calf ratios will be calculated and the calves will be ranked and sorted by sex, sire, and dam.

The program will then return to the program menu.

8. Update Routine

When the program comes to this routine, the following update menu will be displayed.

"Do you want to:

1 . . . . . DELETE A CALF
2 . . . . . CHANGE A CALF
3 . . . . . COMBINE TWO GROUPS OF CALVES
4 . . . . . DELETE A GROUP
5 . . . . . RENAME A GROUP

SELECT OPTION:

If option "1" or option "2" is chosen, the following questions will be asked:

"What is the number of the contemporary group of calves which you are going to be working with?"

"What drive will you be using?"

"What is the identification number of the calf to be updated?"

The program will then either delete the calf or allow you to change an input item of the calf depending on which option was chosen. It will then ask if there are any more changes to be made. If no more changes are to be made, the program will then recalculate the ratios, ranking and sorting them by sex, sire, and dam.

If option "3" is chosen, the following question will be asked:

"What is the number of the first group?"

"What drive is this group on ?" ("A" or "B")

"What is the number of the second group?"

"What drive is this group on?" ("A" or "B")

"What is the number of the combination group?"

"What drive is this group on?" ("A" or "B")

The program will then combine the two groups. After the groups have been combined, the program will ask if there are any more changes to be made. If there are no more changes, it will then recalculate the ratios, ranking and sorting them by sex, sire, and dam.

If option "4" is chosen, you will be asked:

"What group would you like deleted?"

"What drive will you be using?"

The program will then delete the group you requested and ask if there are any more changes to be made. If there are not any more changes, the program will return to the program menu.

If option "5" is chosen, you will be asked:

"What group do you want to rename?"

"What drive will you be using?" ("A" or "B")

"What is the new group number?"

The program will then rename the group and ask if there are any more changes to be made, then the program will return to the program menu.

When renaming a group, you are restricted to a single drive. That is, you may not rename a group on drive "A" to another group on drive "B".

C. Output Routine.

When the output routine is requested, the following questions will be asked:

"What group do you want the output to come from?"

"What drive is this group on?" ("A" or "B")

The following output menu will then be displayed:

OUTPUT MENU

1 . . . . . INFORMATION ON A PARTICULAR CALF
2 . . . . . A CONTEMPORARY GROUP OF CALVES
3 . . . . . CALVES OF A PARTICULAR SIRE
4 . . . . . CALVES OF A PARTICULAR SEX
5 . . . . . CALVES OF A PARTICULAR DAM

SELECT OPTION:

If option "1" is chosen, you will be asked:

"What is the calf identification number?"

"Do you want a hardcopy of the output?"

At this time, the program will print out the calf that was requested.

If option "2" was chosen, you will be asked

"Do you want a hardcopy of the output?"

Then the entire group of calves will be printed out.

If option "3", "4", or "5" is chosen, you will be asked one of the following questions:

If "3": "What is the sire identification number?"

If "4": "What sex are the calves?
1 . . . . . : BULL
2 . . . . . : STEER
3 . . . . . : HEIFER

SELECT OPTION "

If "5": "What is the dam identification number?"

Then you will be asked "Do you want a hardcopy of the output?" The program will then print out all the calves in the particular category that you have selected.

D. Initialize Birth Weights.

If the standard birth weights are to be used and they have not been stored before, a list of the birth weights of various breeds of calves will be printed on the screen in order to help you choose what unknown birth weights you wish to use.

If the birth weights have already been initialized at a previous time, the birth weights that are stored on the disk will be printed out.

The program will then ask:

"What birth weights do you want to be used for a male calf when the birth weights are unknown?"

"What birth weight do you want to be used for a female calf when the birth weights are unknown?"

Control of the program will then go back to the program menu.

E. Initialize Adjustment Factors.

A list of the adjustment factors currently stored on the disk are printed on the screen. There are three adjustment factors for each age group of calves. As each age group appears on the screen, any or all of these factors may be changed. If you do not want to change a value, simply press the "RETURN" key and the value will not be changed. The program will ask these three questions for each of the five age:

"What is the adjustment factor for a bull calf?"

"What is the adjustment factor for a steer calf?"

"What is the adjustment factor for a heifer calf?"

F. See Available Groups.

This routine allows you to see what groups are available on a particular drive. It first asks you:

"What drive is the data on?"

It then asks you if you would like a hardcopy and then it will print a list of the available groups on the disk that is in the drive that was requested.

IV. EXITING THE PROGRAM

To exit the program, the "!" key may be depressed. This action will display a menu of options to choose from. You may select to exit the program and return to the main menu, start the program over from the beginning, review the instructions or objectives from within the program,or take a look at the user's manual. In addition, you can always return back to where you were in the program before the "!" key was pressed.

This menu also appears when option "7" is chosen from the main program menu.

V. DEFINITIONS AND INTERPRETATIONS

Contemporary group: Groups of calves raised under same environmental conditions.

Dam age adjustment: Additive calf weight factors have been specified for different age of dam for different breeds. The adjustments are specified for heifer, bull, steer calves. Users of the program should check with the appropriate breed association to determine the dam age adjustment factors for the specific breed in question.

Unknown birth weights: If calves are not individually weighed at birth, breed associations have birth weight standards that can be used for female and make calves.

Weaning weight ratio: This is computed by dividing the individual calf's adjusted weaning weight by the average adjusted weight for his contemporary group times 100. A ratio of greater than 100 means the calf's performance was greater than the average in the group. This program ranks calves from highest to lowest ratio.

Weaning weights are a useful measure of the cow's mothering ability and the calf's growth rate. If this measure is used to select genetically superior animals, it must be used with animals that are produced in a similar environment and actual weaning weights must be adjusted for the age of the calf and the age of the dam.

To be a valid measure of performance, the calf weaning age should not be less than 160 days or greater than 250 days.

VI. FORMULAS

To calculate the adjusted weight:

205W = (((WWT - BWT) / AGE) * 205) + BWT + ADJ

Where: 205W => 205 day adjusted weaning weight
WWT => Actual weaning weight
BWT => Actual birth weight or recommended standard for your breed
ADJ => Age of cow adjustment

Note: "-" = Subtraction
"+" = Addition
"/" = Division
"*" = Multiplication

*****This formula should not be used to adjust weights for calves younger than 160 or older than 250 days of age for the same contemporary or management group.

To calculate the weaning weight ratios:

$$\text{Weaning weight ratio} = \frac{\text{Adjusted individual weaning weight}}{\text{Contemporary group average adjusted Weaning Weight}} * 100$$

VII. REFERENCES

USDA. 1976. Guidelines for uniform beef improvement program. Beef Improvement Federation Recommendation. Program AID 1020.

VIII. INFORMATION WORKSHEET

An information worksheet similar to the one that follows is available to the user if he/she desires it when the question is asked upon completion of the printing of this user's manual. It is useful when gathering and entering the calf data necessary for this program.

CALF ID	DAM ID	CALF BIRTH DATE	S E X	BIRTH WT.	AGE OF DAM	SIRE ID	WEANING DATE	ACTUAL WEAN. WT.

IX. EXAMPLE

This is an example of how this program can be used. It will demonstrate how to input a group of calves and how the calves of a particular sire can be printed out.

MENU

1 . . . . . INPUT CALF DATA
2 . . . . . UPDATE EXISTING CALF DATA
3 . . . . . OUTPUT CALF DATA
4 . . . . . INITIALIZE BIRTH WEIGHTS
5 . . . . . INITIALIZE ADJUSTMENT FACTORS
6 . . . . . SEE AVAILABLE GROUPS
7 . . . . . EXIT PROGRAM

SELECT OPTION: 1

What is the number of the contemporary group of calves which you are going to be working with? 1981

What drive will you be using? ("A" or "B") A

What is the calf identification number? 1

What is the dam identification number? 100

What is the birth date of the calf? (MM.DD.YY) 1.10.81

What is the sex of this calf?

1 . . . . . BULL
2 . . . . . STEER
3 . . . . . HEIFER

SELECT OPTION: 1

What is the birth weight of the calf? (If the birth weight is unknown, just press "RETURN" and a stored birth weight will be used.) 76

What is the age of the dam? (In years) 2

What is the sire identification number? 1

What is the weaning date of the calf? (MM.DD.YY) 8.22.81

What is the actual weaning weight? 560

(The mistake correcting routine will then appear as follows:)

```
1.   CALF IDENTIFICATION NUMBER . . . . . 1
2.   DAM IDENTIFICATION NUMBER . . . . . 100
3.   CALF BIRTH DATE . . . . . 1/10/81
4.   CALF SEX . . . . . 1
5.   CALF BIRTH WEIGHT . . . . . 76
6.   AGE OF THE DAM (IN YEARS) . . . . . 2
7.   SIRE IDENTIFICATION NUMBER . . . . . 1
8.   WEANING DATE . . . . . 8/22/81
9.   ACTUAL WEANING WEIGHT . . . . . 560
```

If you wish to change an item enter its line number and press "RETURN", or just press "RETURN" to continue: <RETURN>

(The adjusted weights are calculated and the calf is stored.)

"Do you want to enter another calf in this group? (Y/N) Y

(Three more calves are entered and stored on the disk to complete the example group.)

Would you like a list of the calves now in this group? (Y/N) Y

(The output is as follows)

CALVES IN GROUP # 1981

CALF ID	DAM ID	CALF BIRTH DATE	SEX	BIRTH WT.	DAM AGE	SIRE ID	CALF WEAN DATE	ACTUAL WEAN. WT.
1	100	1/10/81	1	76	2	1	8/22/81	560
2	101	1/1/81	1	70	4	1	8/22/81	550
3	102	1/15/81	2	70	5	2	8/22/81	600
4	103	1/10/81	1	65	3	2	8/22/81	540

"Do you want to make any changes to the calves in this group? (Y/N) N

(The group is then ranked by the calculated ratios and sorted by sire, sex, and dam.)

```
                                  * MENU

                          1 . . . . . . . . . . . . . . . INPUT CALF DATA
                          2 . . . . . . . . . . . . . . . UPDATE EXISTING CALF DATA
                          3 . . . . . . . . . . . . . . . OUTPUT CALF DATA
                          4 . . . . . . . . . . . . . . . INITIALIZE BIRTH FACTORS
                          5 . . . . . . . . . . . . . . . INITIALIZE ADJUSTMENT FACTORS
                          6 . . . . . . . . . . . . . . . SEE AVAILABLE GROUPS
                          7 . . . . . . . . . . . . . . . EXIT PROGRAM

                    SELECT OPTION:  3

               What group do you want the output to come from?  1981

               What drive is this group on?  ("A" or "B") A

                                  *** OUTPUT MENU ***

                          1 . . . . . . . . . . . . . . . INFORMATION ON A PARTICULAR CALF
                          2 . . . . . . . . . . . . . . . A CONTEMPORARY GROUP OF CALVES
                          3 . . . . . . . . . . . . . . . CALVES OF A PARTICULAR SIRE
                          4 . . . . . . . . . . . . . . . CALVES OF A PARTICULAR SEX
                          5 . . . . . . . . . . . . . . . CALVES OF A PARTICULAR DAM

                    SELECT OPTION:  3

               "Do you want a hardcopy of the output?  N

               "What is the sire identification number?  2
```

(The output will be:)

CALF ID	DAM ID	CALF BIRTH DATE	SEX	BIRTH WT.	DAM AGE	SIRE ID	CALF WEAN DATE	ACT. WEAN WT.	AGE IN DAYS	DAM & SEX ADJ	ADJ 205 DAY WT.	ADJ FACTOR
3	102	1/15/81	2	70	5	2	8/22/81	600	219	0	566	103
4	103	1/10/81	3	65	3	2	8/22/81	540	224	36	535	98

X. DISCLAIMER

This analysis is provided by the Texas Agricultural Extension Service solely on as "as is" basis. TAEX assumes no liability for the use of this data. Please note that there may be slight errors due to rounding.

Educational programs conducted by the Texas Agricultural Extension Service serve people of all ages regardless of socioeconomic level, race, color, sex, religion, or national origin.

This user's manual is distributed in furtherance of the Acts of Congress of May 8, 1914 as amended, and June 30, 1914.

*** END OF USER'S MANUAL ***

BEST COPY AVAILABLE

PARLIAMENTARY PROCEDURE

DIRECTIONS ON BACKING-UP

BEFORE USING THIS SOFTWARE, MAKE A BACKUP OF THE ORIGINAL DISKETTE. Besides a Radic Shack Model III, 4, or 4P computer with two disk drives, you will need (1) the original diskette, (2) a backup diskette on which to copy and (3) a write protect tab. A copy of the Model III Manual would be useful if you have trouble. Any Radio Shack store should have this manual available for reference or purchase.

1. Place a write protect tab over the notch in the original diskette, then switch on the computer.

2. After the drive lights go out, place the original diskette in drive 0, and close the drive door.

3. Press the reset switch, and respond to the time and date prompts.

4. The program will "auto boot" to a "menu." Type 7 and press the ENTER key.

5. At the ">" prompt type CMD"S and press the ENTER key.

6. Insert the diskette you want to backup to (destination) in drive 1. At this point the original diskette (source) should still be in drive 0.

7. At the "TRSDOS READY" prompt, type BACKUP and press the ENTER key.

8. Below are some questions the backup program may ask you as well as the appropriate responses:

QUESTION	APPROPRIATE RESPONSE
Source Drive Number?	type the number 0 and press the ENTER key.
Destination Drive Number?	type the number 1 and press the ENTER key.
Source Disk Master Password?	type PASSWORD and press the ENTER key.
Disk Contains Data, Use Disk or Not?	type Y and press the ENTER key.
Do You Wish to Re-Format the Disk?	type Y and press the ENTER key.

9. When the message "Backup Complete" appears, remove the original diskette from drive 0 and place it in a safe place. Label the diskette in drive 1 as a backup of the original diskette. You may want to make additional copies for use in your department. If so, go to step number 6 and repeat the process.

TRS 80 Model 3/4/4P
* * * * PARLIAMENTARY PROCEDURE * * * *

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INTRODUCTION

This program was developed for a Radio Shack Model III computer with 48-K Ram memory. The program will also run on the Model IV with Model III TRSDOS.

This is a general purpose program that conducts objective (multiple choice or true/false) quizzes or drill and practice exercises.

This program has the following six (6) objectives:

1-Run a test on parliamentary procedures general knowledge

2-Review test results of students

3-Erase the test results from the diskette

4-Create a localized file of questions

5-Print a copy of a test that is on the diskette

6-Edit a test on file

These same six objectives will be used as choices which you will select from the menu of the program.

DIRECTIONS ON "RUNNING THE PROGRAM"

1. Switch on the computer.

2. After the drive lights go out, place the program diskette in drive 0, and close the drive door.

3. Press the reset switch, and respond to the time and date prompts.

4. The program will "auto boot." First some "credits" and then the program menu will appear. The menu relates to the objectives discussed earlier.

   Please type the NUMBER of your selection and press the ENTER key. The directions for each item on the menu are given in the corresponding sections on the following pages.

SELECTION NUMBER 1
RUN A TEST

1-This program allows you to run one of the original files of questions from this diskette or a file of questions which you had previously entered. The screen will give you a menu of previously written files of questions. If you have created any other files of questions, you must remember the file name in which you stored that file.

2-From the choices on the screen or one of your pre-written programs, you select one of the programs and type in that program name exactly as shown or exactly as you stored it. If you have forgotten the name you can find it by looking at DIR when you are in the TRSDOS mode. It is suggested the first time you use this program that you use EXAMPLE/VIS. This is a set of 10 questions which lets the students become familiar with the program.

3-The screen will prompt WHAT HEADING DO YOU WANT DISPLAYED ON THE TEST? You may use the name of the program or another name such as Test-1, Final Exam, or any other name up to fifteen (15) characters.

4-At this point, you would let the students enter their name and press the ENTER key.

5-The first question will appear on the screen with the number 1 of the choices flashing. If you believe the first choice is correct, press the ENTER key. If you believe another answer is correct, use the up or down arrow to change the flashing number. When you have selected the correct answer by having its number flashing, you press the ENTER key.

6-After all the questions have been answered correctly, the results of the student will be displayed.

7-To get out of this mode and get back to the menu, you must press the SHIFT key and the * at the same time.

SELECTION NUMBER 2
REVIEW TEST RESULTS

1-This will let you look at the results of up to 50 students. If you have a printer you may have a copy printed out by pressing the Y and the ENTER key.

SELECTION NUMBER 3
ERASE TEST RESULTS FROM DISKETTE

1-If you want to erase the results you must type in Y for YES and press the ENTER key.

SELECTION NUMBER 4
CREATE A FILE OF QUESTIONS

1-This program will allow you to create a localized file of questions.

2-You may have at the maximum of forty (40) questions per file. Depending on your type and length of questions, you should get approximately four to ten more files of forty questions on this disk. Enter the number of questions and press the ENTER key.

3-You may have a maximum of 4 choices per question. Enter the number of choices per question and press the ENTER key.

4-You now enter the first question which can be up to three lines long. If you do not want to split a word at the end of a line, press the down arrow. After you have entered the question, press the ENTER key.

5-You now enter the first possible choice for the question (up to two lines) and press the ENTER key.

6-After the last choice is entered the computer prompts "WHICH CHOICE IS CORRECT?" You enter the correct choice and press the ENTER key.

7-The question "QUESTION 1 OK (Y/N)/?" appears. At this point, you can look over the question and the answer choices to make sure they're right. If they are, enter Y and press the ENTER key to continue to question 2. To re-do the question, enter N and press the ENTER key. The question will be erased from the screen so you can start over.

8-When you have typed in all of the quiz questions that you asked for, you will see the message: "WHAT FILE NAME DO YOU WANT TO USE FOR THE TEST ON DISKETTE?" You then enter a file name (which consists of up to eight uppercase letters and numbers). The computer will then save your test on the diskette under that file name and return you to the option list. You must not use a previously used file name.

SELECTION NUMBER 5
PRINT COPY OF TEST

1-Type in the name of the file you want printed and press the ENTER key.

2-Type in the header you want to use and press the ENTER key.

3-Type in how many copies you want and press the ENTER key.

SELECTION NUMBER 6
EDIT A TEST

1-Type in the file name you want to edit and press the ENTER key.

2-The flashing number indicates your possible changes to the question, choices, or the correct choices.

3-To change the number of the correct answer choice, make the corresponding number flash by pressing the up or down arrow key and press the ENTER key. Then enter the number of the correct choice and press the ENTER key.

4-To change the question press the up or down arrow key to make the number flash for CHANGE THE QUESTION and press the ENTER key. Then enter the question and press the ENTER key.

5-To change ONE OF THE answer choices, press the up or down arrow key to make that number flash and press the ENTER key. Then enter the answer choice and press the ENTER key.

6-When no change is to be made, press the N key.

7-After the last question you will assign a file name to the program (up to eight uppercase letters and numbers). You may use one of the original file names, but doing so will erase that file from the diskette.